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<213> homo sapiens

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<212> DNA

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<213> homo sapiens

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<211> 1890

<212> DNA

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Arg	Leu	Asp 35	Tyr	Thr	Leu	Gly	Asp 40	Arg	Thr	Leu	Val	Ile 45	Asp	Thr	Phe
Gln	Ala 50	Ser	Phe	Leu	Leu	Pro 55	Glu	Val	Met	Gly	Ser 60	Asp	His	Cys	Pro
Val 65	Gly	Ala	Val	Leu	Ser 70	Val	Ser	Ser	Val	Pro 75	Ala	Lys	Gln	Суз	Pro 80
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Lys	Ala 130	Gln	Val	Arg	Ser	Thr 135	Arg	Pro	Gln	Pro	Ser 140	Gln	Val	Gly	Ser
Ser 145	Arg	Gly	Gln	Lys	Asn 150	Leu	Lys	Ser	Tyr	Phe 155	Gln	Pro	Ser	Pro	Ser 160

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Ser	Ala	Leu	Met 180	Thr	Pro	Lys	Thr	Pro 185	Glu	Glu	Lys	Ala	Val 190	Ala	Lys
Val	Val	Lys 195	Gly	Gln	Ala	Lys	Thr 200	Ser	Glu	Ala	Lys	Asp 205	Glu	Lys	Glu
Leu	Arg 210	Thr	Ser	Phe	Trp	Lys 215	Ser	Val	Leu	Ala	Gly 220	Pro	Leu	Arg	Thr
Pro 225	Leu	Cys	Gly	Gly	His 230	Arg	Glu	Pro	Cys	Val 235	Met	Arg	Thr	Val	Lys 240
Lys	Pro	Gly	Pro	Asn 245	Leu	Gly	Arg	Arg	Phe 250	Tyr	Met	Cys	Ala	Arg 255	Pro
Arg	Gly	Pro	Pro 260	Thr	Asp	Pro	Ser	Ser 265	Arg	Cys	Asn	Ser	Ser 270	Ser	Gly
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	His	Gly	Ser	Leu 20	Trp	Pro	Pro	Gln	Arg 25	Gly	Val	Arg	Lys	Gly 30	Pro	Ala
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Ch	Ser 65	Gly	Val	Phe	Gly	Val 70	Met	Arg	Ala	Leu	Ile 75	Ser	Gly	Arg	Leu	Gly 80
AT Hells made livery	Ser	Ser	Met	Ser	Gly 85	Glu	Ala	Trp	Gly	Gln 90	Leu	Gly	Glu	Gly		
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C	Gln	Ser 50	His	Leu	Tyr	Cys	Asp 55	Cys	Asn	Asn	His	Asp 60	Cys	Glu	Asp	Gln
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Control Contro

Pro 145	Gly	Glu	Gln	Pro	Val 150	Asp	Leu	Asn	Leu	Pro 155	Leu	Glu	Ala	Pro	Pro 160
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Val	Pro	Arg 195	Thr	Phe	Ser	Thr	Gln 200	Ile	Val	Arg	Glu	Ser 205	Glu	Ile	Pro
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Gln	His	Ser	Arg	Thr 245	Gln	Glu	Gly	Thr	Glu 250	Glu	Ala	Pro	Ile	Gln 255	Ala
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Glu	Pro	Phe 275	Glu	Met	Ile	Ser	Ser 280	Ser	Val	Asn	Val	Leu 285	Gly	Gln	Gln
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Ser 305	Asp	Glu	Glu	Pro	Ala 310	Glu	Ile	Leu	Glu	Phe 315	Pro	Pro	Asp	Asp	Ser 320
Gln	Glu	Ala	Thr	Thr 325	Pro	Leu	Ala	Asp	Glu 330	Gly	Arg	Ala	Pro	Lys 335	Asp
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Ile	Gly	Phe 355	Ser	Ser	Ser	Val	Asp 360	Glu	Thr	Gly	Val	Asp 365	Ser	Lys	Asn
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Gly	Glu 450	Leu	Ile	Gly	Pro	Val 455	Gly	Thr	Gly	Leu	Asp 460	Ser	Arg	Val	Met
Val 465	Thr	Ser	Ala	Ala	Arg 470	Thr	Glu	Leu	Ile	Leu 475	Pro	Glu	Gln	Asp	Arg 480

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Gln	Lys	Phe 35	Leu	Ser	Phe	Pro	Leu 40	Met	Ile	Ala	Lys	Arg 45	Gln	Pro	His
His	Trp 50	Gln	Met	Lys	Ala	Gly 55	Leu	Gln	Lys	Thr	Asn 60	Gln	Lys	Val	Lys
Asn 65	Leu	Val	Cys	Ser	Gly 70	Phe	Gly	Phe	Gln	Thr 75	Leu	Gly	Phe	Pro	Leu 80
Leu	Leu	Met	Arg	Gln 85	Val	Leu	Ile	Pro	Lys 90	Met	Thr	Ser	Arg	Asp 95	Leu
Leu	Pro	Phe	Lys 100	His	Ser	Leu	Arg	His 105	Asp	Gln	Arg	Gln	Asn 110	Cys	Leu
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Ser ,	Thr	Glu	Glu 20	Glu	Asn	Pro	Met	Phe 25	Gly	Ser	Gln	Asn	Gln 30	Ser	Arg
Pro	Asp	Phe 35	Leu	Leu	Ser	Gly	Leu 40	Ser	Phe	Gly	Ala	Leu 45	Pro	Ser	Ser
Ala	Ser 50	Gly	Val	Val	Ala	Ser 55	Trp	Leu	Ser	Ser	Gly 60	Gly	Asn	Ser	Arg
Ile 65	Ser	Ala	Gly	Ser	Ser 70	Ser	Glu	Gln	Leu	Ser 75	Ala	Ser	Trp	Trp	Pro 80
Glu	Gly	Thr	Ser	Asn 85	Val	Ser	Val	Сув	Cys 90	Pro	Ser	Thr	Leu	Thr 95	Leu
Glu	Glu	Ile	Ile 100	Ser	Asn	Gly	Ser	Pro 105	Val	Ser	Gly	Trp	Arg 110	Ser	Pro

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THE LEAD AND	Ala	Leu	Glu	Pro 20	Thr	Tyr	Ser	Ser	Ser 25	Ser	Ser	Ser	Ser	Ser 30	Ser	Ser
Hart Han II Hall the seas season	Ser	Ser	Ser 35	Ser	Ser	Ser	Ser	Ser 40	Ser	Ser	Ser	Ser	Ser 45	Ser	Ser	Ser
	Ser	Ser 50	Ser	Ser	Phe	Phe	Phe 55	Leu	Leu	Phe	Ser	Ala 60	Leu	Thr	Thr	Pro
# # # # # # # # # # # # # # # # # # #	Phe 65	Phe	Ala	Ala	Ser	Gly 70	Phe	Pro	Leu	Ala	Arg 75	Tyr	Ala	Ala	Ile	Ser 80
i.i.	Phe	Ser	Tyr	Phe	Ser 85	Phe	Thr	Ser	Gln	Pro 90	Ser	Phe	His	Lys	Ala 95	Ala
######################################	Cys	His	Leu	Gln 100	Gln	Cys	Tyr	Ser	Thr 105	Ser	Leu	Pro	Val	Ser 110	Ser	Gln
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	ГÀЗ	Lys 130		-	Glu		135	Asn	Asn	Thr	Ala	Ala 140	Asp	Asp	Lys	Gln
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Arg 65	Tyr	Leu	Gly	Asn	Thr 70	Val	Asp	Leu	Ser	Ser 75	Phe	Asp	Phe	Arg	Thr 80
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Leu	Pro	Ile 115	Arg	Gln	Thr	Ala	Ser 120	Ile	Phe	Lys	Gln	Pro 125	Val	Thr	Lys
Val	Thr 130	Asn	His	Pro	Ser	Asn 135	Lys	Val	Lys	Ser	Asp 140	Pro	Gln	Arg	Met
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Ser	Ala	Val 195	Ala	Ser	Ala	Leu	His 200	Thr	Ser	Ser	Ala	Pro 205	Ile	Thr	Gly
Gln	Val 210	Ser	Ala	Ala	Val	Glu 215	Lys	Asn	Pro	Ala	Val 220	Trp	Leu	Asn	Thr
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Lys	Ser	Gln 35		Lys	His	Phe	Cys 40		Ile	Ser	Arg	Asn 45	Phe	Leu	Leu
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	Arg	Cys	Leu	Pro	Ser 85	Val	Leu	Leu	Pro	Ile 90	Ser	Cys	Val	Leu	Ala 95	Val
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geste stragt (f. 11. straft, gent ligere of Builte treeff firm Route of E. Mann, Ameri	Ile 1	Tyr	Thr	Ser	Lys 5	Ile	His	Leu	Lys	Arg 10	His	Trp	Leu	Val	Leu 15	Leu
The Tast Had	Lys	Ser	Ser	Met 20	Cys	Ser	Gly	Thr	Phe 25	Phe	Phe	Leu	Gln	Ala 30	Lys	Ala
h=!	Ser	Gly	Asn 35	Ile	Phe	Val	Gln	Phe 40	Leu	Gly	Ile	Phe	Ser 45	Trp	Gly	Lys
	Ser	Val 50	Glu	Ser	Tyr	Leu	Ile 55	Ile	Phe	Leu	Gly	Phe 60	Ile	Ser	Thr	Val
Harry Charles	His 65	Phe	Asn	Ile	His	Leu 70	Phe	Cys	Ile	Ser	Ser 75	Ser	Arg	Gln	Asp	Val 80
	Cys	His	Gln	Cys	Phe 85	Phe	Gln	Phe	Leu	Ala 90	Tyr	Leu	Leu	Tyr	Ser 95	Leu
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	Gly	Leu	Arg 115	Cys	Val	Lys	Pro	Asn 120	Ser	Arg	Val	Leu	Phe 125	His	Ser	Ser
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Trp	His	Pro 35	Pro	Arg	Ala	Leu	Pro 40	Thr	Ala	Ser	Ser	Leu 45	Ser	Thr	Val
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Gly	Thr	Pro 35	Pro	Glu	Pro	Ser	Pro 40	Gln	Pro	Ala	Ala	Phe 45	Pro	Gln	Ser
Leu	Pro 50	Phe	Pro	Gln	Ser	Pro 55	Ala	Phe	Pro	Thr	Ala 60	Ser	Pro	Ala	Pro
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45

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Gln	Lys 130	Leu	Ala	Glu	Gln	Phe 135	Val	Leu	Leu	Asn	Leu 140	Val	Tyr	Glu	Thr
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Ser	Asn	Arg	Leu 180	Tyr	Ala	Tyr	Glu	Pro 185	Ala	Asp	Thr	Ala	Leu 190	Leu	Leu
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Cys	Thr	Ala	Met	Thr 165	Val	Gln	Ile	Leu	Leu 170	Lys	Leu	Asp	Arg	Leu 175	Asp
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His	Gly	Arg 35	Leu	His	Leu	Ser	Pro 40	Arg	Pro	Glu	Pro	Gly 45	Cys	Arg	Pro
Ala	Сув 50	Ala	Ala	Pro	Gly	Gly 55	Gln	Pro	Gly	Val	His 60	Ser	His	Asp	Ser
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Leu	Val	Gln 35	Val	Leu	His	Ser	Leu 40	Gln	Leu	Leu	Pro	Gly 45	Glu	Val	Gln
Ala	Val 50	Gln	Leu	Gln	Gln	Asp 55	Leu	His	Cys	His	Gly 60	Cys	Ala	Leu	Gln
Ala 65	Val	Pro	Leu	Val	Gln 70	Arg	Thr	Gln	Gly	Gly 75	Ile	Arg	Val	Leu	Val 80

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Val	His	Ala	Pro 100	Ala	His	Leu	Ser	Val 105	Gln	Leu	Gly	His	Asp 110	Ala	Val
Pro	Pro	Thr 115	Leu	Val	Gly	Glu	Val 120	Val	Ser	Lys	His	Ala 125	His	Gly	Leu
Glu	Leu 130	Arg	Gly	Arg	Gly	Gly 135	Leu	Asp	Leu	Ile	Gln 140	Asp	His	Thr	Glu
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Gly	Leu	Asp 35	Tyr	Ile	Arg	Tyr	Gln 40	Met	Glu	Asn	Gln	Lys 45	Thr	Ser	Leu
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Gly	Ala	Pro	Ala 20	Ala	Ala	Сув	Leu	Arg 25	Leu	Gly	Thr	Ser	Ala 30	Gly	Thr
Gly	Ser	Arg 35	Arg	Ala	Met	Ala	Leu 40	Tyr	His	Thr	Glu	Glu 45	Arg	Gly	Gln
Pro	Cys 50	Ser	Gln	Asn	Tyr	Arg 55	Leu	Phe	Phe	Lys	Asn 60	Val	Thr	Gly	His
Tyr 65	Ile	Ser	Pro	Phe	His 70	Asp	Ile	Pro	Leu	Lys 75	Val	Asn	Ser	Lys	Glu 80
Glu	Asn	Gly	Ile	Pro	Met	Lys	Lys	Ala	Arg	Asn	Asp	Glu	Tyr	Glu	Asn

 85
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 95

Leu	Phe	Asn	Met 100	Ile	Val	Glu	Ile	Pro 105	Arg	Trp	Thr	Asn	Ala 110	Lys	Met
Glu	Ile	Ala 115	Thr	Lys	Glu	Pro	Met 120	Asn	Pro	Ile	Lys	Gln 125	Tyr	Val	Lys
Asp	Gly 130	Lys	Leu	Arg	Tyr	Val 135	Ala	Asn	Ile	Phe	Pro 140	Tyr	Lys	Gly	Tyr
Ile 145	Trp	Asn	Tyr	Gly	Thr 150	Leu	Pro	Gln	Thr	Trp 155	Glu	Asp	Pro	His	Glu 160
Lys	Asp	Lys	Ser	Thr 165	Asn	Cys	Phe	Gly	Asp 170	Asn	Asp	Pro	Ile	Asp 175	Val
Cys	Glu	Ile	Gly 180	Ser	Lys	Ile	Leu	Ser 185	Cys	Gly	Glu	Val	Ile 190	His	Val
Lys	Ile	Leu 195	Gly	Ile	Leu	Ala	Leu 200	Ile	Asp	Glu	Gly	Glu 205	Thr	Asp	Trp
Lys	Leu 210	Ile	Ala	Ile	Asn	Ala 215	Asn	Asp	Pro	Glu	Ala 220	Ser	Lys	Phe	His
Asp 225	Ile	Asp	Asp	Val	Lys 230	Lys	Phe	Lys	Pro	Gly 235	Tyr	Leu	Glu	Ala	Thr 240
Leu	Asn	Trp	Phe	Arg 245	Leu	Tyr	Lys	Val	Pro 250	Asp	Gly	Lys	Pro	Glu 255	Asn
Gln	Phe	Ala	Phe 260	Asn	Gly	Glu	Phe	Lys 265	Asn	Lys	Ala	Phe	Ala 270	Leu	Glu
Val	Ile	Lys 275	Ser	Thr	His	Gln	Cys 280	Trp	Lys	Ala	Leu	Leu 285	Met	Lys	Lys
Cys	Asn 290	Gly	Gly	Ala	Ile	Asn 295	Cys	Thr	Asn	Val	Gln 300	Ile	Ser	Asp	Ser
Pro 305	Phe	Arg	Cys	Thr	Gln 310	Glu	Glu	Ala	Arg	Ser 315	Leu	Val	Glu	Ser	Val 320
Ser	Ser	Ser	Pro	Asn 325	Lys	Glu	Ser	Asn	Glu 330	Glu	Glu	Gln	Val	Trp.	His
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Phe Leu Gly Lys 340

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Ala	Ile 50	Phe	Leu	Phe	Arg	Val 55	His	Leu	Gln	Arg	Asn 60	Ile	Met	Lys	Gly
Gly 65	Asn	Val	Val	Thr	Ser 70	Tyr	Ile	Leu	Lys	Glu 75	Glu	Ala	Val	Ile	Leu 80
Arg	Ala	Gly	Leu	Ala 85	Ala	Leu	Leu	Ser	Val 90	Val	Gln	Gly	His	Ser 95	Thr
Ala	Arg	Pro	Gly 100	Pro	Cys	Thr	Gly	Pro 105	Gln	Pro	Gln	Ala	Arg 110	Ser	Gly
Trp	Gly	Thr 115	Arg	Ala	Gln	Gln	Pro 120	Gln	Gln	Arg	Ala	His 125	Gly	Val	Asn
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Val	Arg	Leu 35	Gly	Ala	Pro	Leu	Pro 40	Phe	Arg	Ala	Ile	Arg 45	Val	Thr	Cys
Ile	Gly 50	Ser	Cys	Gly	Val	Ser 55	Asn	Lys	Ala	Asn	Asp 60	Thr	Ala	Trp	Val
Val 65	Glu	Glu	Gly	Tyr	Phe 70	Asn	Ser	Ser	Leu	Ser 75	Leu	Ala	Asp	Lys	Gly 80
Ser	Leu	Pro	Ala	Gly 85	Glu	His	Ser	Phe	Pro 90	Phe	Gln	Phe	Leu	Leu 95	Pro
Ala	Thr	Ala	Pro 100	Thr	Ser	Phe	Glu	Gly 105	Pro	Phe	Gly	Lys	Ile 110	Val	His
Gln	Val	Arg 115	Ala	Ala	Ile	His	Thr 120	Pro	Arg	Phe	Ser	Lys 125	Asp	His	Lys
Cys	Ser 130	Leu	Val	Phe	Tyr	Ile 135	Leu	Ser	Pro	Leu	Asn 140	Leu	Asn	Ser	Ile
Pro 145	Asp	Ile	Glu	Gln	Pro 150	Asn	Val	Ala	Ser	Ala 155	Thr	Lys	Lys	Phe	Ser 160
Tyr	Lys	Leu	Val	Lys 165	Thr	Gly	Ser	Val	Val 170	Leu	Thr	Ala	Ser	Thr 175	Asp
Leu	Arg	Gly	Tyr 180	Val	Val	Gly	Gln	Ala 185	Leu	Gln	Leu	His	Ala 190	Asp	Val

Glu	Asn	Gln 195	Ser	Gly	Lys	Asp	Thr 200	Ser	Pro	Val	Val	Ala 205	Ser	Leu	Leu
Gln	Lys 210	Val	Ser	Tyr	Lys	Ala 215	Lys	Arg	Trp	Ile	His 220	Asp	Val	Arg	Thr
Ile 225	Ala	Glu	Val	Glu	Gly 230	Ala	Gly	Val	Lys	Ala 235	Trp	Arg	Arg	Ala	Gln 240
Trp	His	Glu	Gln	Ile 245	Leu	Val	Pro	Ala	Leu 250	Pro	Gln	Ser	Ala	Leu 255	Pro
Gly	Cys	Ser	Leu 260	Ile	His	Ile	Asp	Tyr 265	Tyr	Leu	Gln	Val	Ser 270	Leu	Lys
Ala	Pro	Glu 275	Ala	Thr	Val	Thr	Leu 280	Pro	Val	Phe	Ile	Gly 285	Asn	Ile	Ala
Val	Asn 290	His	Ala	Pro	Val	Ser 295	Pro	Arg	Pro	Gly	Leu 300	Gly	Leu	Pro	Pro
Gly 305	Ala	Pro	Pro	Leu	Val 310	Val	Pro	Ser	Ala	Pro 315	Pro	Gln	Glu	Glu	Ala 320
Glu	Ala	Glu	Ala	Ala 325	Ala	Gly	Gly	Pro	His 330	Phe	Leu	Asp	Pro	Val 335	Phe
Leu	Ser	Thr	Lys 340	Ser	His	Ser	Gln	Arg 345	Gln	Pro	Leu	Leu	Ala 350	Thr	Leu
Ser	Ser	Val 355	Pro	Gly	Ala	Pro	Glu 360	Pro	Cys	Pro	Gln	Asp 365	Gly	Ser	Pro
Ala	Ser 370	His	Pro	Leu	His	Pro 375	Pro	Leu	Cys	Ile	Ser 380	Thr	Gly	Ala	Thr
Val 385	Pro	Tyr	Phe	Ala	Glu 390	Gly	Ser	Gly	Gly	Pro 395	Val	Pro	Thr	Thr	Ser 400
Thr	Leu	Ile	. Leu	Pro 405	Pro	Glu	Tyr	Ser	Ser 410	Trp	Gly	Tyr	Pro	Tyr 415	Glu
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<213> homo sapiens

Ala

Ala

Ala

195

Ser

Pro

Ala

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Ala

Ala

Ser

Arg Glu Ser Arg Leu 210

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<211> 635

<212> PRT

<213> homo sapiens

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Ser	Glu	Pro	Glu 20	Arg	Lys	Arg	Ala	Arg 25	Thr	Asp	Glu	Val	Pro 30	Ala	Gly
Gly	Ser	Arg 35	Ser	Glu	Ala	Glu	Asp 40	Glu	Asp	Asp	Glu	Asp 45	Tyr	Val	Pro
Tyr	Val 50	Pro	Leu	Arg	Gln	Arg 55	Arg	Gln	Leu	Leu	Leu 60	Gln	Lys	Leu	Leu
Gln 65	Arg	Arg	Arg	Lys	Gly 70	Ala	Ala	Glu	Glu	Glu 75	Gln	Gln	Asp	Ser	Gly 80
Ser	Glu	Pro	Arg	Gly 85	Asp	Glu	Asp	Asp	Ile 90	Pro	Leu	Gly	Pro	Gln 95	Ser
Asn	Val	Ser	Leu 100	Leu	Asp	Gln	His	Gln 105	His	Leu	Lys	Glu	Lys 110	Ala	Glu
Ala	Arg	Lys 115	Glu	Ser	Ala	Lys	Glu 120	Lys	Gln	Leu	Lys	Glu 125	Glu	Glu	Lys
Ile	Leu 130	Glu	Ser	Val	Ala	Glu 135	Gly	Arg	Ala	Leu	Met 140	Ser	Val	Lys	Glu
Met 145	Ala	Lys	Gly	Ile	Thr 150	Tyr	Asp	Asp	Pro	Ile 155	Lys	Thr	Ser	Trp	Thr 160
Pro	Pro	Arg	Tyr	Val 165	Leu	Ser	Met	Ser	Glu 170	Glu	Arg	His	Glu	Arg 175	Val
Arg	Lys	Lys	Tyr 180	His	Ile	Leu	Val	Glu 185	Gly	Asp	Gly	Ile	Pro 190	Pro	Pro
Ile	Lys	Ser 195	Phe	Lys	Glu	Met	Lys 200	Phe	Pro	Ala	Ala	Ile 205	Leu	Arg	Gly
Leu	Lys 210	Lys	Lys	Gly	Ile	His 215	His	Pro	Thr	Pro	Ile 220	Gln	Ile	Gln	Gly
Ile 225	Pro	Thr	Ile	Leu	Ser 230	Gly	Arg	Asp	Met	Ile 235	Gly	Ile	Ala	Phe	Thr 240
Gly	Ser	Gly	Lys	Thr 245	Leu	Val	Phe	Thr	Leu 250	Pro	Val	Ile	Met	Phe 255	Cys
Leu	Glu	Gln	Glu 260	Lys	Arg	Leu	Pro	Phe 265	Ser	Lys	Arg	Glu	Gly 270	Pro	Tyr
Gly	Leu	Ile 275	Ile	Cys	Pro	Ser	Arg 280	Glu	Leu	Ala	Arg	Gln 285	Thr	His	Gly

Ile	Leu 290	Glu	Tyr	Tyr	Cys	Arg 295	Leu	Leu	Gln	Glu	Asp 300	Ser	Ser	Pro	Leu
Leu 305	Arg	Cys	Ala	Leu	Cys 310	Ile	Gly	Gly	Met	Ser 315	Val	Lys	Glu	Gln	Met 320
Glu	Thr	Ile	Arg	His 325	Gly	Val	His	Met	Met 330	Val	Ala	Thr	Pro	Gly 335	Arg
Leu	Met	Asp	Leu 340	Leu	Gln	Lys	Lys	Met 345	Val	Ser	Leu	Asp	Ile 350	Cys	Arg
Tyr	Leu	Ala 355	Leu	Asp	Glu	Ala	Asp 360	Arg	Met	Ile	Asp	Met 365	Gly	Phe	Glu
Gly	Asp 370	Ile	Arg	Thr	Ile	Phe 375	Ser	Tyr	Phe	Lys	Gly 380	Gln	Arg	Gln	Thr
Leu 385	Leu	Phe	Ser	Ala	Thr 390	Met	Pro	Lys	Lys	Ile 395	Gln	Asn	Phe	Ala	Lys 400
Ser	Ala	Leu	Val	Lys 405	Pro	Val	Thr	Ile	Asn 410	Val	Gly	Arg	Ala	Gly 415	Ala
Ala	Ser	Leu	Asp 420	Val	Ile	Gln	Glu	Val 425	Glu	Tyr	Val	Lys	Glu 430	Glu	Ala
Lys	Met	Val 435	Tyr	Leu	Leu	Glu	Cys 440	Leu	Gln	Lys	Thr	Pro 445	Pro	Pro	V.al
Leu	Ile 450	Phe	Ala	Glu	Lys	Lys 455	Ala	Asp	Val	Asp	Ala 460	Ile	His	Glu	Tyr
Leu 465	Leu	Leu	Lys	Gly	Val 470	Glu	Ala	Val	Ala	Ile 475	His	Gly	Gly	Lys	Asp 480
Gln	Glu	Glu	Arg	Thr 485	Lys	Ala	Ile	Glu	Ala 490	Phe	Arg	Glu	Gly	Lys 495	Lys
Asp	Val	Leu	Val 500	Ala	Thr	Asp	Val	Ala 505	Ser	Lys	Gly	Leu	Asp 510	Phe	Pro
Ala	Ile	Gln 515	His	Val	Ile	Asn	Tyr 520	Asp	Met	Pro	Glu	Glu 525	Ile	Glu	Asn
Tyr	Val 530	His	Arg	Ile	Gly	Arg 535	Thr	Gly	Arg	Ser	Gly 540	Asn	Thr	Gly	Ile
Ala 545	Thr	Thr	Phe	Ile	Asn 550	Lys	Ala	Cys	Asp	Glu 555	Ser	Val	Leu	Met	Asp 560
Leu	Lys	Ala	Leu	Leu 565	Leu	Glu	Ala	Lys	Gln 570	Lys	Val	Pro	Pro	Val 575	Leu
Gln	Val	Leu	His 580	Cys	Gly	Asp	Glu	Ser 585	Met	Leu	Asp	Ile	Gly 590	Gly	Glu
Arg	Gly	Cys 595	Ala	Phe	Cys	Gly	Gly 600	Leu	Gly	His	Arg	Ile 605	Thr	Asp	Cys
Pro	Lys 610	Leu	Glu	Ala	Met	Gln 615	Thr	Lys	Gln	Val	Ser 620	Asn	Ile	Gly	Arg

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Met	Ser	Pro	Cys 20	Trp	Thr	Leu	Glu	Glu 25	Ser	Ala	Ala	Val	Pro 30	Ser	Ala
Gly	Ala	Trp 35	Val	Ile	Gly	Ser	Leu 40	Thr	Ala	Pro	Asn	Ser 45	Arg	Leu	Cys
Arg	Pro 50	Ser	Arg	Ser	Ala	Thr 55	Ser	Val	Ala	Arg	Thr 60	Thr	Trp	Pro	Thr
Ala 65	Pro	Trp	Thr	Ser	Glu 70	Pro	Thr	Val	Phe	Pro 75	Ser	Leu	Gln	Glu	Ala 80
Ser	Val	Pro	Lys	Thr 85	Ala	Thr	Ser	Leu	His 90	Ile	Gln	Gln	Pro	Pro 95	Gly
Gln	Asn	Gln	His 100	Phe	Ser	Ser	Ala	Gly 105	Leu	Glu	Trp	Ala	Arg 110	Leu	Val
Leu	Ala	Ala 115	Cys	Ser	Leu	Cys	Ser 120	Ser	Glu	Leu	Leu	Phe 125	Leu	Phe	Pro
Phe	Thr 130	Pro	Ala	Ala	Ile	Lys 135	Ala	Gln	Thr	Ser	Ser 140	Pro _.	Lys	Lys	Lys
Lys 145	Lys	Lys													
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Leu	Leu	Val	Phe 20	Ala	Pro	Met	Asp	Gly 25	Tyr	Gly	Leu	Asn	Pro 30	Leu	Glu
Gln	Gln	Val 35	Leu	Val	Asp	Gly	Val 40	His	Val	Cys	Leu	Leu 45	Leu	Cys	Lys
Asp	Glu 50	Tyr	Arg	Arg	Gly	Cys 55	Leu	Leu	Gln	Ala	Leu 60	Glu	Gln	Val	His
His 65	Leu	Gly	Leu	Leu	Leu 70	His	Ile	Phe	Tyr	Leu 75	Leu	Asp	Asp	Ile	Gln 80

Ala	Gly	Ser	Pro	Ser 85	Ala	Pro	His	Ile	Asp 90	Gly	His	Arg	Leu	Tyr 95	Lys
Gly	Thr	Leu	Ser 100	Lys	Val	Leu	Asn	Leu 105	Leu	Arg	His	Gly	Gly 110	Thr	Glu
Glu	Gln	Gly 115	Leu	Ser	Leu	Ala	Leu 120	Glu	Val	Gly	Glu	Asp 125	Gly	Thr	Asp
Val	Thr 130	Leu	Glu	Ala	His	Val 135	Asp	His	Ala	Val	Ser 140	Leu	Val	Gln	Gly
Gln 145	Val	Ala	Thr	Asp	Val 150										
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Arg	Gly	Asp	Asn 20	Val	Tyr	Val	Val	Thr 25	Glu	Val	Leu	Gln	Thr 30	Gln	Lys
Glu	Val	Glu 35	Val	Thr	Arg	Thr	His 40	Lys	Arg	Glu	Gly	Ser 45	Gly	Arg	Phe
Ser	Leu 50	Pro	Gly	Ala	Thr	Cys 55	Leu	Gln	Gly	Glu	Gly 60	Gln	Gly	His	Leu
Ser 65	Gln	Lys	Lys	Thr	Val 70	Thr	Ile	Pro	Ser	Gly 75	Ser	Thr	Leu	Ala	Phe 80
Arg	Val	Ala	Gln	Leu 85	Val	Ile	Asp	Ser	Asp 90	Leu	Asp	Val	Leu	Leu 95	Phe
Pro	Asp	Lys	Lys 100		Arg	Thr	Phe	Gln 105	Pro	Pro	Ala	Thr	Gly 110	His	Lys
Arg	Ser	Thr 115	Ser	Glu	Gly	Ala	Trp 120	Pro	Gln	Leu	Pro	Ser 125	Gly	Leu	Ser
Met	Met 130	Arg	Cys	Leu	His	Asn 135	Phe	Leu	Thr	Asp	Gly 140	Val	Pro	Ala	Glu
Gly 145	Ala	Phe	Thr	Glu	Asp 150	Phe	Gln	Gly	Leu	Arg 155	Ala	Glu	Val	Glu	Thr 160
Ile	Ser	Lys	Glu	Leu 165	Glu	Leu	Leu	Asp	Arg 170	Glu	Leu	Cys	Gln	Leu 175	Leu
Leu	Glu	Gly	Leu 180	Glu	Gly	Val	Leu	Arg 185	,Asp	Gln	Leu	Ala	Leu 190	Arg	Ala
Leu	Glu	Glu 195	Ala	Leu	Glu	Gln	Gly 200	Gln	Ser	Leu	Gly	Pro 205	Val	Glu	Pro
Leu	Asp 210	Gly	Pro	Ala	Gly	Ala 215	Val	Leu	Glu	Cys	Leu 220	Val	Leu	Ser	Ser

Gly 225	Met	Leu	Val	Pro	Glu 230	Leu	Ala	Ile	Pro	Val 235	Val	Tyr	Leu	Leu	Gly 240
Ala	Leu	Thr	Met	Leu 245	Ser	Glu	Thr	Gln	His 250	Lys	Leu	Leu	Ala	Glu 255	Ala
Leu	Glu	Ser	Gln 260	Thr	Leu	Leu	Gly	Pro 265	Leu	Glu	Leu	Val	Gly 270	Ser	Leu
Leu	Glu	Gln 275	Ser	Ala	Pro	Trp	Gln 280	Glu	Arg	Arg	Pro	Cys 285	Pro	Cys	Pro
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Arg	His	Ser	Arg 20	Thr	Ala	Pro	Ala	Gly 25	Pro	Ser	Arg	Gly	Ser 30	Thr	Gly
Pro	Arg	Leu 35	Trp	Pro	ÇÀè	Ser	Ser 40	Ala	Ser	Ser	Lys	Ala 45	Arg	Arg	Ala
Ser	Trp 50	Ser	Arg	Ser	Thr	Pro 55	Ser	Arg	Pro	Ser	Ser 60	Ser	Ser	Trp	His
Ser 65	Ser	Leu	Ser	Lys	Ser 70	Ser	Ser	Ser	Leu	Glu 75	Met	Val	Ser	Thr	Ser 80
Ala	Arg	Arg	Pro	Trp 85	Lys	Ser	Ser	Val	Asn 90	Ala	Pro	Ser	Ala	Gly 95	Thr
Pro	Ser	Val	Arg 100	Lys	Leu	Trp	Arg	His 105	Leu	Ile	Met	Glu	Arg 110	Pro	Glu
Gly	Ser	Cys 115	Gly	Gln	Ala	Pro	Ser 120	Leu	Val	Glu	Arg	Leu 125	Trp	Pro	Val
Ala	Gly 130	Gly	Trp	Lys	Val	Leu 135	Cys	Phe	Leu	Ser	Gly 140	Lys	Arg	Arg	Thr
Ser 145	Lys	Ser	Glu	Ser	Ile 150	Thr	Ser	Trp	Ala	Thr 155	Arg	Asn	Ala	Arg	Val 160
Leu	Pro	Glu	Gly	Met 165	Val	Thr	Val	Phe	Phe 170	Trp	Leu	Arg	Trp	Pro 175	Trp
Pro	Ser	Pro	Cys 180	Lys	His	Val	Ala	Pro 185	Gly	Arg	Glu	Asn	Arg 190	Pro	Glu
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205

Leu

225

His

Leu Cys

Pro

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Ser	Leu	Gln 35	Gln	Gln	Ala	Glu	Pro 40	Cys	Leu	Trp	Ser	Gly 45	Ala	Val	His
Ser	Ser 50	Val	Cys	Leu	Val	Leu 55	Gly	Leu	Glu	Leu	Asp 60	Arg	Gly	Gly	Val
Ser 65	Ser	Pro	Ser	Leu	Asn 70	Ser	Glu	Gln	Thr	Leu 75	Cys	Leu	Ala	Pro	
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Ser	Asn	Leu	Leu 20	Met	Ala	Gly	Ser	Pro 25	Leu	Сув	Pro	Leu	Ser 30	Leu	Ala
Leu	Val	Ile 35	Ala	Glu	Leu	Cys	Ala 40	Gln	Cys	Cys	Gly	Leu 45	Ala	Val	Ala
Arg	Leu 50	Phe	Leu	Trp	Gly	Ala 55	Arg	Ala	Gly	Cys	Gly 60	Asn	Gln	Ser	Ser
Gln 65	Thr	Asp	Val	Ser	Gln 70	Ala	Glu	Asp	Ser	Phe 75	Leu	Ala	Glu	Val	Ser 80
Pro	His	Leu	Gln	Val 85	Ser	Gly	Trp	Gly	Gly 90	Ala	Arg	Arg	Gly	Arg 95	His
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His Cys Ser Cys Ala Ala Trp Ala Leu Leu Leu Arg Thr Pro Arg Ala

Thr

Arg

Ala

Lys

Arg

Val

Gln

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150

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Arg

Leu

135

Glu

25

30

125

His

Thr

Ser

Glu

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Pro

Leu

m

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Val

130

Gly

115

Cys

Lys

Arg

Gly

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Val	Leu	Arg 35	Arg	Val	Pro	Val	Ala 40	Ala	Arg	Arg	Pro	Ala 45	Gly	Ala	Cys
Pro	Arg 50	Val	Thr	Ala	Trp	Arg 55	Cys	Trp	Gly	Ser	Gly 60	His	Leu	Pro	Cys
Leu 65	Glu	Cys	Gln	Glu	Gly 70	Glu	Ala	Phe	Glu	Glu 75	Ala	Ser	Val	Leu	Ala 80
Ala	Arg	Ser	Leu	Ser 85	Gln	Pro	Leu	Pro	Gly 90	Ser	Cys	Thr	Gly	Gln 95	Gly
Leu	Ile	Pro	Cys 100	His	Ala	Gly	Pro	Leu 105	Glu	Gln	Val	Gly	Trp 110	Gly	Trp
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Val	His	Arg 35	Pro	Gly	Arg	Gly	Pro 40	Ala	Leu	Cys	Pro	Thr 45	Lys	Ser	Ser
_		~ 3	_	_		_	_	_	_	_	_	_		~ 3	_

Leu His Gln Ser Ser Trp Ser Pro Pro Leu Arg Asp Pro Ala Gln Leu 50 55 Arg Ser Gly Ile Gly Thr Val Pro \mathtt{Trp} Arg Val ${\tt Trp}$ Arg 65 75 Arg Arg Ile Pro Cys Thr Leu Arg Arg Thr Pro Thr Pro Glu 85 90 His Ser Arg Gly His Cys Glu Arg Gln Arg Glu Arg Val Glu 100 105 110 Thr Leu Thr Asp Pro Val Gly Ser Gly Arg Ala Glu Asp Arg His 115 120 125

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Acres dent	Asp	Phe	Glu 35	Leu	Leu	Asp	Gln	Ser 40	Glu	Leu	Asp	Gln	Ile 45	Glu	Ser	Glu
	Leu	Gly 50	Leu	Thr	Gln	Asp	Gln 55	Glu	Ala	Glu	Ala	Gln 60	Gln	Asn	Lys	Lys
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	Ser	Trp	Ile 35	Lys	Leu	Arg	Val	Asn 40	Trp	Asp	Leu	His	Lys 45	Thr	Arg	Lys
	Gln	Lys 50	His	Ser	Lys	Ile	Arg 55	Ser	Leu	Gln	Val	Ser 60	Phe	Gln	Ile	Cys
	Trp 65	Glu	Ala	Ile	Asn	Leu 70	Gly	Ile	Ser	Leu	Gln 75	Gln	Ser	Thr	Lys	Asn 80
	Thr	Lys	Lys	Ile	Ser 85	Asn	Lys	Lys	Lys	Lys 90	Lys	Lys	Arg	Lys	Arg 95	Lys
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	Thr	Trp 50	Lys	Arg	Phe	Ser	Leu 55	Ser	Arg	Val	Leu	Lys 60	Tyr	Thr	Phe	Lys
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M	Arg	Ser	Arg	Glu 20	Gln	Ala	Ala	Ile	Pro 25	Pro	Leu	Leu	Ser	Ser 30	Arg	Thr
hr: D	Gln	Leu	Cys 35	Gly	Leu	Gly	Phe	Leu 40	Phe	Ala	Gly	Leu	Ala 45	Pro	Cys	Arg
100 mg	Thr	Leu 50	Val	Leu	Glu	Leu	Glu 55	Gly	Pro	Ile	Leu	Pro 60	Arg	Gly	Asp	Ser
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	Gln	Gly	Leu 35	Ser	Cys	Val	Ala	Leu 40	Asp	Phe	Phe	Leu	Arg 45	Asp	Leu	Arg
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	Gly	Trp	Lys 35	Arg	Gly	Val	Thr	Ile 40	Thr	Gly	Val	Val	Met 45	Leu	Arg	Val
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	Phe	Leu	Pro	Pro 20	Ala	Gly	Gln	Val	Trp 25	Pro	Cys	Ser	Leu	Gly 30	Arg	Ala
	Pro	Ala	Pro 35	Leu	Thr	Thr	Leu	Gln 40	Leu	Thr	Met	Gln	Leu 45	Met	Pro	Lys
	Leu	Trp 50	Cys	Pro	Val	Cys	Ser 55	Ser	Pro	Gly	Ser	His 60	Cys	His	Leu	Gln
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	Leu	Leu	Ala	Trp	Pro 85	Asn	Leu	Ala	Phe	Cys 90	Ala	Met	Leu	Glu	Leu 95	Glu
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Ala	His	Trp 35	Thr	Pro	Gln	Leu	Trp 40	His	Gln	Leu	His	Gly 45	Glu	Leu	Gln
Ser	Gly 50	Gln	Arg	Gly	Trp	Gly 55	Pro	Ala	Lys	Arg	Ala 60	Arg	Pro	Asp	Leu
Pro 65	Ser	Gly	Arg	Gln	Glu 70	Gly	Pro	Asp	Pro	Ala 75	Arg	Arg	Ser	Arg	Gly 80
Ser	Pro	Gln	Pro	Pro 85	Leu	Leu	Leu	Ile	Ala 90	Thr	Gly	Thr	Ser	Gly 95	Asp
Arg	Leu	Cys	Ser 100	Trp	Glu	Ser	Arg	Ser 105	Pro	Gly	Phe	Val	Gly 110	Leu	Pro
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Tyr	Glu	Thr 35	Glu	Gln	Leu	Arg	Ala 40	Val	Ser	Ser	Ser	Ala 45	Glu	Ala	Ala
Trp	Ala 50	Ala	Thr	Pro	Pro	Phe 55	Cys	Asn	His	Pro	Met 60	Met	Ser	Pro	Pro
His 65	Leu	Thr	Ser	Arg	Trp 70	Gly	Trp	Met	Ala	Glu 75	Gln	Met	Lys	Pro	Ala 80
Leu	Trp	Arg	Gly	Ser 85	Leu	Thr	Glu	Met	His 90	Thr	Phe	Met	Gly	Glu 95	Val
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Gly	Glu	Ser 35	Leu	Gln	Pro	Arg	Glu 40	Gly	Cys	Glu	Asp	Cys 45	Asp	Arg	Gln
Lys	Ala 50	Asn	Leu	Arg	Ile	Arg 55	Phe	Lys	Pro	Ser	Leu 60	Phe	Gln	His	Val
Gly 65	Thr	His	Ser	Ser	Leu 70	Ala	Gly	Lys	Ile	Gln 75	Lys	Leu	Lys	Asp	Lys 80
Asp	Phe	Gly	Lys	Gln 85	Ala	Leu	Arg	Lys	Glu 90	His	Val	Asn	Pro	Pro 95	Ala
Glu	Val	Ser	Thr 100	Ser	Leu	Lys	Thr	Tyr 105	Gln	His	Phe	Thr	Leu 110	Glu	Lys
Ala	Tyr	Leu 115	Arg	Glu	Asp	Phe	Phe 120	Trp	Ala	Phe	Thr	Pro 125	Ala	Ala	Gly
Asp	Phe 130	Ile	Arg	Phe	Arg	Phe 135	Phe	Gln	Pro	Leu	Arg 140	Leu	Glu	Arg	Phe
Phe 145	Phe	Arg	Ser	Gly	Asn 150	Ile	Glu	His	Pro	Glu 155	Asp	Lys	Leu	Phe	Asn 160
Thr	Ser	Val	Glu	Val 165	Leu	Pro	Phe	Asp	Asn 170	Pro	Gln	Ser	Asp	Lys 175	Glu
Ala	Leu	Gln	Glu 180	Gly	Arg	Thr	Ala	Thr 185	Leu	Arg	Tyr	Pro	Arg 190	Ser	Pro
Asp	Gly	Tyr 195	Leu	Gln	Ile	Gly	Ser 200	Phe	Tyr	Lys	Gly	Val 205	Ala	Glu	Gly
Glu	Val 210	Asp	Pro	Ala	Phe	Gly 215	Pro	Leu	Glu	Ala	Leu 220	Arg	Leu	Ser	Ile
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Ser	Pro	His	Phe	Tyr 85	Pro	Asp	Phe	Ser	Arg 90	Leu	Arg	Glu	Ser	Phe 95	Gly
Asp	Pro	Lys	Glu 100	Arg	Val	Arg	Trp	Arg 105	Thr		Gln	Asn	Leu 110	Asp	Tyr
Cys	Phe	Leu 115	Met	Met	Tyr	Ala	Gln 120	Ser	Lys	Gly	Ile	Tyr 125	Tyr	Val	Gln
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Ser	Gln	Leu	Gly	Phe 165	Ile	Gly	Lys	Met	Phe 170	Lys	Ser	Leu	Asp	Leu 175	Ser
Leu	Ile	Val	Glu 180	Phe	Ile	Leu	Met	Phe 185	Tyr	Arg	Asp	Lys	Pro 190	Ile	Asp
Trp	Leu	Leu 195	Asp	His	Ile	Leu	Trp 200	Val	Lys	Val	Cys	Asn 205	Pro	Glu	Lys
Asp	Ala 210	Lys	Thr	Val	Thr	Gly 215	Arg	Lys	Pro	Thr	Cys 220	Gly	Ser	Ala	Ser
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Gly	Gln	Arg 35	Leu	Trp	Lys	Ala	Gly 40	Ala	Ala	Glu	Gly	Ala 45	Cys	Glu	Pro
Ala	Ser 50	Arg	Gly	Glu	His	Glu 55	Pro	Glu	Asp	Ile	Pro 60	Ala	Leu	His	Pro
Gly 65	Glu	Ser	Leu	Pro	Ala 70	Arg	Gly	Leu	Leu	Leu 75	Gly	Leu	His	Pro	Cys 80
Arg	Gly	Gly	Leu	His 85	Pro	Leu	Pro	Leu	Leu 90	Pro	Thr	Ser	Lys	Thr 95	Gly

Ala	Val	Leu	Leu 100	Pro	Gln	Trp	Glu	His 105	Arg	Ala	Pro	Gly	Gly 110	Gln	Ala
Leu	Gln	His 115	Val	Cys	Gly	Gly	Ala 120	Ala	Leu	Arg	Gln	Pro 125	Ser	Val	Arg
Gln	Gly 130	Gly	Pro	Ala	Gly	Gly 135	Pro	His	Arg	His	Pro 140	Pro	Val	Pro	Ser
Glu 145	Pro	Arg	Arg	Leu	Pro 150	Pro	Asp	Arg	Leu	Leu 155	Leu	Gln	Gly	Ser	Gly 160
Arg	Gly	Arg	Gly	Gly 165	Pro	Ser	Leu	Arg	Pro 170	Ser	Gly	Ser	Thr	Ala 175	Pro
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Leu	Gly	Ala 35	Pro	Gly	Ala	Lys	Ser 40	Arg	Leu	Trp	Cys	Arg 45	Gly	Gly	Gly
Leu	Ser 50	Leu	Asn	Arg	His	Pro 55	Glu	Val	Leu	Leu	Arg 60	Cys	Trp	Val	His
Pro 65	Glu	Trp	His	Gly	Glu 70	Gln	Leu	Trp	Pro	Val 75	Leu	Leu	Pro	Arg	Pro 80
Val	Leu	Gly	Lys	Leu 85	Ser	Ser	Gly	Pro	Ser 90	Leu	Gln	Arg	Pro	Arg 95	Met
Gly	Trp	Val	Trp 100	Gly	Thr	His	Gly	Glu 105	Trp	Pro	Glu	Glu	Leu 110	Arg	Val
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Arg	Pro	Ser 35	Phe	Pro	Glu	Asp	Arg 40	Glu	Pro	Gln	Ile	Pro 45	Tyr	Pro	Glu
Pro	Thr 50	Trp	Pro	Pro	Pro	Leu 55	Ser	Ala	Pro	Arg	Val 60	Pro	Tyr	His	Ser
Ser 65	Val	Leu	Ser	Val	Thr 70	Arg	Pro	Val	Val	Val 75	Ser	Ala	Thr	His	Pro 80
Thr	Leu	Pro	Ser	Ala 85	His	Gln	Pro	Pro	Val 90	Ile	Pro	Ala	Thr	His 95	Pro
Ala	Leu	Ser	Arg 100	Asp	His	Gln	Ile	Pro 105	Val	Ile	Ala	Ala	Asn 110	Tyr	Pro
Asp	Leu	Pro 115	Ser	Ala	Tyr	Gln	Pro 120	Gly	Ile	Leu	Ser	Val 125	Ser	His	Ser
Ala	Gln 130	Pro	Pro	Ala	His	Gln 135	Pro	Pro	Met	Ile	Ser 140	Thr	Lys	Tyr	Pro
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Ala	Gly	Thr	Gln	Thr 165	Thr	Thr	His	Leu	Pro 170	Gly	Ile	Pro	Pro	Asn 175	His
Ala	Pro	Leu	Val 180	Thr	Thr	Leu	Gly	Ala 185	Gln	Arg	Pro	Pro	Gln 190	Ala	Pro
Asp	Ala	Leu 195	Val	Leu	Arg	Thr	Gln 200	Ala	Thr	Gln	Leu	Pro 205	Ile	Ile	Pro
Thr	Ala 210	Gln	Pro	Ser	Leu	Thr 215	Thr	Thr	Ser	Arg	Ser 220	Pro	Val	Ser	Pro
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Pro	Trp	Pro	Ile 100	Asp	Arg	Ala	Ser	Gln 105	Arg	Thr	Glu	Ser	His 110	Arg	Tyr
Pro	Thr	Arg 115	Ser	Pro	Pro	Gly	His 120	Pro	Arg	Ser	Val	Pro 125	Pro	Gly	Ser
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Thr	Glu 50	Lys	Ser	Leu	Gln	Asn 55	Ser	His	Trp	Lys	Arg 60	Arg	Asn	Lys	Gly

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+ a p = 1	Ser	Ala	Arg 35	Ser	Asp	Ala	Gly	Cys 40	Gly	Glu	Cys	Arg	Arg 45	Asp	Pro	Gly
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Gly	Tyr	Thr	Arg	Gln	Asn	Ser	Glu	Thr	Gly	Tyr	Arg	Ser	Thr	Lys	Ile

			20					25					30		
His	Ser	His 35	Asn	Lys	Lys	Asn	Trp 40	Arg	Leu	Ala	Gln	Ser 45	Thr	Leu	Ser
Phe	Leu 50	Phe	Thr	Gln	Gln	His 55	Val	Gly	Asp	Pro	Ala 60	Ala	Asp	Gly	Glu
His 65	Thr	Ser	Arg	Phe	Arg 70	Ala	Leu	Gln	Gly	Ala 75	Leu	Tyr	His	Phe	His 80
Leu	Gln	Gln	Gln	Val 85	Val	His	Gly	Pro	Gln 90	Lys	Leu	Leu	Ile	Leu 95	Leu
Ile	Ser	Leu	Asn 100	Arg	Pro	Phe	Arg	His 105	Leu	Asp	Gln	Thr	Gln 110	Val	Ile
Gly	Arg	Leu 115	Gln	Glu	Arg	Arg	Pro 120	Leu	His	Phe	Arg	Tyr 125	His	Thr	Arg
His	Glu 130	Val	Gly	Val	Glu	Phe 135	His	Arg	Ala	Asp	Thr 140	Asp	Leu	Gly	Gly
Leu 145	Glu	Ala	Gln	Gly	Glu 150	Ala	Thr	Gly	Pro	His 155	Pro	Pro	His	Met	Arg 160
Ala	Gln	Gln	Ile	Val 165	Gly	Lys	Gln	Phe	His 170	Val	Ala	Ala	Gln	Thr 175	Leu
Ala	Arg	Pro	Glu 180	Pro	Glu	Lys	Gly	Arg 185	Pro	Pro	Leu	Pro	His 190	Phe	Arg
Gly	Cys	Ser 195	Thr	Arg	Cys	Tyr	Trp 200	Ile	Ala	Arg	Arg	Thr 205	Gly	Ser	Gly
Glu	Leu 210	Ala	Gly	Thr	Ser	Arg 215	Val	Cys	Gly	Ser	Ser 220	Phe	Leu	Tyr	Ala
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Lys	Gln	Gly 35	Ile	Asp	Gln	Gln	Lys 40	Tyr	Thr	Val	Ile	Thr 45	Arg	Ĺys	Thr
Gly	Ala 50	Trp	His	Asn	Gln	Leu 55	Ser	Val	Ser	Ser	Ser 60	Leu	Ser	Ser	Met
Leu 65	Gly	Ile	Pro	Arg	Leu 70	Met	Gly	Asn	Ile	Arg 75	Pro	Asp	Ser	Gly	His 80

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Cys	Arg	Val	Pro	Ser 85	Ile	Thr	Ser	Thr	Ser 90	Ser	Ser	Arg	Trp	Cys 95	Met
Val	Leu	Arg	Asn 100	Ser	Ser	Phe	Ser	Ser 105	Tyr	Pro	Ser	Thr	Gly 110	Pro	Phe
Gly	Thr	Trp 115	Ile	Arg	Arg	Lys	Leu 120	Ser	Ala	Ala	Ser	Arg 125	Asn	Ala	Asp
His	Ser 130	Thr	Leu	Gly	Ile	Ile 135	Arg	Ala	Thr	Lys	Leu 140	Gly	Leu	Asn	Ser
Thr 145	Gly	Gln	Ile	Arg	Thr 150	Ser	Val	Ala	Trp	Arg 155	Arg	Arg	Gly	Lys	Pro 160
Arg	Asp	Pro	Thr	Pro 165	Arg	Thr	Cys	Glu	Leu 170	Ser	Arg	Leu	Trp	Val 175	Ser
Ser	Phe	Met	Ser 180	Pro	His	Lys	Leu	Ser 185	Pro	Gly	Arg	Asn	Arg 190	Lys	Lys
Val	Val	Leu 195	Arg	Cys	Leu	Thr	Ser 200	Gly	Asp	Ala	Pro	Leu 205	Asp	Ala	Ile
Gly															
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Asp Thr	Ala		Ala	_	Ala Phe	Leu	Arg Glu 40		10		Gln Val	Arg Ser 45			Leu Gly
-	Ile	Val Ile	Ala 20 Lys	Ala	Phe	Ser	Glu	25 Ser	10 Lys Val	Gly	Val	Ser 45	30 Val	Arg	Gly
Thr	Ile Ala	Val Ile 35 Leu	Ala 20 Lys Gly	Ala	Phe Thr	Ser Val 55	Glu 40	25 Ser Arg	Lys Val Cys	Gly	Val Lys	Ser 45	30 Val	Arg Asn	Gly
Thr Cys Thr	Ile Ala 50 Ile	Val Ile 35 Leu Gly	Ala 20 Lys Gly	Ala Val Gly	Phe Thr	Ser Val 55 Gly	Glu 40 Glu	25 Ser Arg	10 Lys Val Cys	Gly Ala Arg	Val Lys 60	Ser 45 Ser	30 Val Glu	Arg Asn Leu	Gly Gln Ala
Thr Cys Thr 65	Ile Ala 50 Ile Ala	Val Ile 35 Leu Gly	Ala 20 Lys Gly	Ala Val Gly Gly Arg 85	Phe Thr His 70 Thr	Ser Val 55 Gly His	Glu 40 Glu Val	25 Ser Arg Ala Gln	Lys Val Cys Thr	Gly Ala Arg 75	Val Lys 60 Arg	Ser 45 Ser Arg	30 Val Glu Leu	Arg Asn Leu Ser	Gly Gln Ala 80
Thr Cys Thr 65 Gly	Ile Ala 50 Ile Ala	Val Ile 35 Leu Gly Pro	Ala 20 Lys Gly Gln Pro	Ala Val Gly Gly Arg 85	Phe Thr His 70 Thr	Ser Val 55 Gly His	Glu 40 Glu Val	25 Ser Arg Ala Gln	Lys Val Cys Thr Gln 90 Gly	Gly Ala Arg 75 Ser	Val Lys 60 Arg Ser	Ser 45 Ser Arg	30 Val Glu Leu Trp	Arg Asn Leu Ser Glu 95	Gly Gln Ala 80 Glu Arg
Thr Cys Thr 65 Gly Leu	Ile Ala 50 Ile Ala Lys	Val Ile 35 Leu Gly Pro Asn Arg 115	Ala 20 Lys Gly Gln Pro Lys 100 Ala	Ala Val Gly Gly Arg 85 His	Phe Thr His 70 Thr Leu Ala	Ser Val 55 Gly His	Glu 40 Glu Val Ser Gly Ala 120	25 Ser Arg Ala Gln Arg 105	Lys Val Cys Thr Gln 90 Gly Arg	Gly Ala Arg 75 Ser	Val Lys 60 Arg Ser Arg	Ser 45 Ser Arg His Pro	30 Val Glu Leu Trp Arg 110 Thr	Arg Asn Leu Ser Glu 95 Ser	Gly Gln Ala 80 Glu Arg

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Phe Gly Arg Ser Ala Ala

Ala

Ile Val Arg Arg Gly Arg Trp Asp

115

Asp

125

Leu Asp

Trp	Arg 130	Val	Asp	Ile	Lys	Thr 135	Ser	Ser	Asp	Ser	Ile 140	Ser	Arg	Met	Ala
Val 145	Ala	Pro	Pro	Gly	Leu 150	Val	Pro	Asp	Gly	Arg 155	Phe	Gln	Gly	Gly	Ser 160
Gln	Ala	Met	Gly												
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Phe	Val	Ser	Arg 20	Phe	Leu	Arg	Phe	Trp 25	Trp	Lys	Phe	Ser	Gly 30	Lys	Arg
Ala	Arg	Ile 35	Ala	Ser	Ala	Glu	Asp 40	Arg	Ser	Arg	Asn	Ala 45	Thr	Ser	Leu
Val	Arg 50	Arg	Cys	Arg	Ala	Trp 55	Ser	Ser	Ser	Ser	Ala 60	Ser	Ser	Trp	Val
Thr 65	Asp	Lys	Leu	Glu	His 70	Val	Thr	Ser	Lys	Ser 75	Phe	Phe	Lys	Pro	Arg 80
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Pro	Gly	Val	Cys 20	Pro	Gly	Gln	Ala	Pro 25	Ala	His	Leu	Leu	Leu 30	Cys	Ala
Ala	Ala	Pro 35	Gly	His	Pro	Gly	Gln 40	Gly	Gln	Gln	Pro	Ala 45	Ala	Gly	Gly
Leu	Val 50	Gly	Asp	Ala	Asp	Arg 55	Ala	Gly	Asp	Leu	Glu 60	Cys	Ser	Pro	Arg
Arg 65	Ile	Phe	Leu	His	Pro 70	Arg	Leu	His	Pro	Pro 75	Arg	His	Leu	Gly	Ser 80
Cys	His	Leu	Asp	Arg 85	Gly	Cys	Gly	Cys	Ala 90	Gly	Trp	Ser	Cys	Cys 95	Leu
His	Leu	Arg	Glu 100	Thr	Gly	Trp	Tyr	Ile 105	Leu	Gly	Pro	Ala	Glu 110	Asp	Ser

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115 120 125

Glu

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Thr	Met	Gly 35	Thr	Ala	Asp	Ser	Asp 40	Glu	Met	Ala	Pro	Glu 45	Ala	Pro	Gln
His	Thr 50	His	Ile	Asp	Val	His 55	Ile	His	Gln	Glu	Ser 60	Ala	Leu	Ala	Lys
Leu 65	Leu	Leu	Thr	Cys	Cys 70	Ser	Ala	Leu	Arg	Pro 75	Arg	Ala	Thr	Gln	Ala 80
Arg	Gly	Ser	Ser	Arg 85	Leu	Leu	Val	Ala	Ser 90	Trp	Val	Met	Gln	Ile 95	Val
Leu	Gly	Ile	Leu 100	Ser	Ala	Val	Leu	Gly 105	Gly	Phe	Phe	Tyr	Ile 110	Arg	Asp
Tyr	Thr	Leu 115	Leu	Val	Thr	Ser	Gly 120	Ala	Ala	Ile	Trp	Thr 125	Gly	Ala	Val
Ala	Val 130	Leu	Ala	Gly	Ala	Ala 135	Ala	Phe	Ile	Tyr	Glu 140	Lys	Arg	Gly	Gly
Thr 145	Tyr	Trp	Ala	Leu	Leu 150	Arg	Thr	Leu	Leu	Ala 155	Leu	Ala	Ala	Phe	Ser 160
Thr	Ala	Ile	Ala	Ala 165	Leu	Lys	Leu	Trp	Asn 170	Glu	Asp	Phe	Arg	Tyr 175	Gly
Tyr	Ser	Tyr	Tyr 180	Asn	Ser	Ala	Cys	Arg 185	Ile	Ser	Ser	Ser	Ser 190	Asp	Trp
Asn	Thr	Pro 195	Ala	Pro	Thr	Gln	Ser 200	Pro	Glu	Glu	Val	Arg 205	Arg	Leu	His
Leu	Cys 210	Thr	Ser	Phe	Met	Asp 215	Met	Leu	Lys	Ala	Leu 220	Phe	Arg	Thr	Leu
Gln 225	Ala	Met	Leu	Leu	Gly 230	Val	Trp	Ile	Leu	Leu 235	Leu	Leu	Ala	Ser	Leu 240
Ala	Pro	Leu	Trp	Leu 245	Tyr	Cys	Trp	Arg	Met 250	Phe	Pro	Thr	Lys	Gly 255	Lys
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Leu Gly Leu Ser Ala Gly Gly Pro Ala Pro Ala Gly Ala Ala Lys

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Pro	Gln 50	Ala	Ser	Arg	Leu	Gln 55	Ala	Lys	Arg	Asp	Pro 60	Ser	Pro	Val	Ser
Gly 65	Pro	Val	His	Leu	Phe 70	Arg	Leu	Ser	Gly	Lys 75	Cys	Phe	Ser	Leu	Val 80
Glu	Ser	Thr	Tyr	Lys 85	Tyr	Glu	Phe	Cys	Pro 90	Phe	His	Asn	Val	Thr 95	Gln
His	Glu	Gln	Thr 100	Phe	Arg	Trp	Asn	Ala 105	Tyr	Ser	Gly	Ile	Leu 110	Gly	Ile
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Arg	Asp 130	Gly	Asp	Asp	Cys	Arg 135	Ser	Arg	Ser	Arg	Gln 140	Ser	Lys	Val	Glu
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Leu	Pro	Ala	Pro 20	Gly	Thr	Ala	Val	Val 25	Thr	Val	Pro	His	Pro 30	His	Ala
Arg	Glu	Gly 35	Val	Val	Gly	Asp	Leu 40	Pro	Leu	Val	Pro	Asp 45	Ala	Glu	Asp
Pro	Thr 50	Val	Gly	Val	Pro	Ala 55	Glu	Gly	Leu	Leu	Val 60	Leu	Gly	His	Val
Val 65	Glu	Arg	Ala	Glu	Leu 70	Ile	Leu	Val	Arg	Gly 75	Leu	His	Gln	Ala	Glu 80
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Gln	His	Glu	Ala 20	Gly	Ser	Pro	Gly	Leu 25	Thr	Ala	Ser	His	Ala 30	Met	Ser

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Ile	His	Leu 35	Ala	Gly	Ser	Leu	Thr 40	Ala	Met	Asp	Ser	Ile 45	Cys	Ala	Ser
Glu	Arg 50	Ser	Gln	Gly	Val	Trp 55	Arg	Ala	Pro	Thr	Pro 60	Gly	Cys	Gln	Gly
Leu 65	Ser	Pro	Gly	Pro	Arg 70	Pro	Gly	Glu	Leu	Pro 75	Gly	Gly	Ser	Ser	Pro 80
Glu	Glu	Arg	Leu	Gly 85	Arg	Leu	Ala	Val	Ala 90	Gly	Pro	Pro	Arg	Gly 95	Ala
Gln	Asn	Val	Ser 100	Gln	Ala	Gly	Pro	Glu 105	Ala	Glu	Ala	Pro	Pro 110	Leu	Arg
Phe	Gly	His 115	Ala	Trp	Gly	Ala	Gln 120	Thr	Pro	Arg	Leu	Gly 125	Ala	Pro	Gly
Pro	Trp 130	Thr	Pro	Leu	Pro	Thr 135	Leu	Pro	Ser	His	Ile 140	Pro	Pro	Phe	Trp
Ser 145	Gln	Thr	Pro	Ala	Gln 150	Arg	Lys	Glu	Gly	Phe 155	Thr	Glu	Glu	Gly	Gln 160
Gly	Arg	Ala	Trp	Pro 165	Gln	Gly	Gly	Asp	Glu 170	Asp	Ile	Ser	Gly	Pro 175	Gly
Ser	Cys	Arg	Leu 180	Leu	Trp	Glu	Glu	Glu 185	Pro	Cys	Val	Cys	Lys 190	Leu	Leu
Gly	Leu	Ala 195	Ala	Arg	Pro	Thr	Ala 200	Gly	Pro	Ser	Leu	Asp 205	Pro	Cys	Thr
Trp	Pro 210	Ser	Ser	Cys	Pro	Leu 215	Ala	Ala	Pro	Gly	Leu 220	Gly	Thr	Gly	Ile
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Ala	His	Gly	Leu 20	Pro	Ser	Pro	Leu	Cys 25	Pro	Pro	Ile	Phe	Pro 30	Leu	Phe
Gly	Pro	Arg 35	His	Gln	His	Lys	Glu 40	Arg	Arg	Gly	Ser	Gln 45	Arg	Lys	Ala
Arg	Ala 50	Glu	Pro	Gly	Pro	Arg 55	Glu	Gly	Met	Arg	Thr 60	Phe	Pro	Val	Gln
Val 65	Ala	Ala	Gly	Cys	Ser 70	Gly	Arg	Lys	Ser	His 75	Ala	Ser	Val	Asn	Cys 80
			_	_		_	_			_			~~1	_	

Trp Gly Trp Arg Pro Ala Pro Leu Gln Gly Pro Ala Leu Thr Pro Ala

85 90 95

				85					90					95	
Arg	Gly	His	Pro 100	Ala	Ala	Leu	Trp	Leu 105	Pro	Leu	Ala	Leu	Ala 110	Gln	Ala
Ser	Ser	Leu 115	Glu	Gly	Trp	Ala	Gly 120	Trp	Ala	Arg	Ala	Gly 125	Thr	Gly	Arg
Gly	Ser 130	Thr	Ser	Asp	Pro	Asp 135	Val	Gly	Trp	Leu	Cys 140	Pro	Pro	Arg	Arg
Glu 145	Ala	Gln	Gln	Thr	Ser 150	Tyr	Thr	Lys	Ala	Lys 155	Ser	Thr	Ile	Gly	Glu 160
Pro	Arg	Ser	His	Phe 165	Met	Gly	Arg	Arg	Pro 170	Arg	Pro	Gln	Gly	Pro 175	Gln
Ser	Lys	Ala	Arg 180	Gly	Arg	Phe	Ile	Pro 185	Glu	Asp	Ser	Pro	Pro 190	Gly	Ala
Ala	Pro	Ala 195	Trp	Gly	Gly	Val	Ser 200	Arg	Pro	Leu	Gly	Cys 205	Leu	Ser	Val
Сув	Gly 210	Thr	Pro	Trp	Ser	Thr 215	Pro								
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Cys Pro Gln Gly His Pro Val Leu Pro Thr Arg Leu

130

135

Trp Ala Trp Gly

140

Arg Val Arg Val Gly Ala Gly His Gly Ser 155 160

Arg	His	Gln	Pro	Asp 165	Ala	Pro	Val	Gly	Val 170	Ala	Arg	Ser	Trp	Asp 175	Gly
Val	Val	Arg	Asn 180	Thr	Ala	Pro	Lys	Thr 185	Gln	Asn	Lys	Asn	Thr 190	Thr	Asn
Gly	Arg	Arg 195	Ser	Pro	Pro	Pro	Thr 200	Glu	Val	Gly	Phe	Glu 205	Pro	Leu	Leu
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Gly	Ala	Gln 35	Arg	Val	Trp	Val	Ser 40	Ser	Leu	Ala	Gly	Trp 45	Arg	Leu	Glu
Arg	Gly 50	Thr	Ala	Arg	Ala	Arg 55	Ser	Pro	Leu	Thr	Leu 60	Pro	Leu	Pro	Val
Gly 65	Gly	Thr	Thr	Arg	Ser 70	Cys	Leu	Arg	Pro	Val 75	Ala	Ser	Arg	Pro	
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Thr	Gly	Ser	Gly 20	Lys	Val	Ser	Gly	Glu 25	Arg	Ala	Arg	Ala	Val 30	Pro	Arg
Ser	Ser	Arg 35	Gln	Pro	Ala	Arg	Leu 40	Leu	Thr	Gln	Thr	Arg 45	Trp	Ala	Pro
Pro	Pro 50	Pro	Ser	Ser	Ser	Leu 55	His	Leu	Pro	. Ala	Arg 60	Ala	Arg	Arg	Pro
Arg 65	Ala	Arg	Gly	Ala	Thr 70	Gly	Ala	Ala	Pro	Ala 75	Pro	Pro	Pro	Ser	
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	Gly	Lys	Arg	Gln 20	Gly	Gln	Arg	Gly	Thr 25	Gly	Pro	Gly	Arg	Pro 30	Pro	Leu
	Glu	Pro	Pro 35	Ala	Arg	Glu	Ala	Ala 40	His	Pro	Asn	Ala	Leu 45	Gly	Ser	Ser
	Thr	Thr 50	Phe	Ile	Phe	Ala	Ala 55	Pro	Ala	Gly	Ala	Gly 60	Pro	Pro	Ala	Glu
	Ser 65	Pro	Arg	Ser	Asn	Arg 70	Ser	Arg	Ala	Ser	Pro 75	Ala	Ala	Ile	Ala	
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	Ala	Ser	Ser	Pro 20	Phe	Tyr	Met	Asn	Cys 25	Cys	Ile	Asn	Lys	His 30	Arg	Val
	Pro	Glu	Thr 35	Thr	Glu	Val	Ile	Ile 40	Leu	Pro	Thr	Glu	Cys 45	Trp	Pro	Gly
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	Leu	Val	Thr	Val 20	Ile	Gln	Leu	His	Ser 25	Tyr	Thr	Val	Ala	Leu 30	Phe	Gly
	Leu	Ser	His 35	Glu	Glu	Val	Leu	Val 40	Thr	Asn	Tyr	Val	Phe 45	Val	Gly	Cys
	Phe															
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	Gln	Ala	Arg	Leu	Arg	Ser	Leu	Arg	Arg	Pro	Asn	Trp	Leu	Cys	Leu	Leu

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Arg	Arg	Gln	Trp 20	Thr	Ser	Leu	Ser	Leu 25	Arg	Val	Thr	Ala	Lys 30	Glu	Leu
Ser	Leu	Val 35	Asn	Lys	Asn	Lys	Ser 40	Ser	Ala	Ile	Val	Glu 45	Ile	Phe	Ser
Lys	Tyr 50	Gln	Lys	Ala	Ala	Glu 55	Glu	Thr	Asn	Met	Glu 60	Lys	Lys	Arg	Ser
Asn 65	Thr	Glu	Asn	Leu	Ser 70	Gln	His	Phe	Arg	Lys 75	Gly	Thr	Leu	Thr	Val 80
Leu	Lys	Lys	Lys	Trp 85	Glu	Asn	Pro	Gly	Leu 90	Gly	Ala	Glu	Ser	His 95	Thr
Asp	Ser	Leu	Arg 100	Asn	Ser	Ser	Thr	Glu 105	Ile	Arg	His	Arg	Ala 110	Asp	His
Pro	Pro	Ala 115	Glu	Val	Thr	Ser	His 120	Ala	Ala	Ser	Gly	Ala 125	Lys	Ala	Asp
Gln	Glu 130	Glu	Gln	Ile	His	Pro 135	Arg	Ser	Arg	Leu	Arg 140	Ser	Pro	Pro	Glu
Ala 145	Leu	Val	Gln	Gly	Arg 150	Tyr	Pro	His	Ile	Lys 155	Asp	Gly	Glu	Asp	Leu 160
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Thr	Pro	Asp	Leu 20	Asp	Ser	Gly	His	Leu 25	Leu	Lys	Pro	Ser	Phe 30	Arg	Val
Asp	Ile	Pro 35	Thr	Ser	Arg	Thr	Val 40	Arg	Ile	Leu	Lys	Thr 45	Thr	Gln	Gln

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Ala	Phe	Tyr 35	Lys	Arg	Leu	Pro	Lys 40	Lys	Lys	Leu	Leu	Thr 45	Arg	Asn	Val
Asp	Lys 50	Pro	Leu	Lys	Ala	Asn 55	Lys	Gln	Gln	Thr	Val 60	Val	Phe	Ala	Phe
Ser 65	Tyr	Ser	Trp	Gln	Ala 70	Glu	Val	Arg	Ala						
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Lys	Leu	Ser	Arg 20	Pro	Cys	Phe	Pro	Pro 25	His	Phe	Phe	Phe	Phe 30	Tyr	Leu
Glu	Pro	Leu 35	Glu	Pro	Asn	Arg	Leu 40	Glu	Pro	Pro	Cys	Leu 45	Leu	Asp	His
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Asp	Lys	Pro	Ala 20	Trp	Ala	Arg	Glu	Val 25	Lys	Glu	Arg	Thr	Arg 30	Met	Asn
Lys	Gln	Gln 35	Asn	Ser	Pro	Leu	Ala 40	Lys	Ser	Lys	Pro	Gly 45	Ser	Thr	Gly
Pro	Glu 50	Pro	Pro	Ser	Pro	Gln 55	Ala	Ser	Pro	Gly	Pro 60	Pro	Gly	Leu	Pro
Trp 65	Ala	Pro	Lys	Pro	Tyr 70	His	Lys	Phe	Met	Ala 75	Phe	Lys	Ser	Phe	Ala 80
Asp	Leu	Pro	His	Arg 85	Pro	Leu	Leu	Val	Asp 90	Leu	Thr	Val	Glu	Glu 95	Gly
Gln	Arg	Leu	Lys 100	Val	Ile	Tyr	Gly	Ser 105	Ser	Ala	Gly	Phe	His 110	Ala	Val
Asp	Val	Asp 115	Ser	Gly	Asn	Ser	Tyr 120	Asp	Ile	Tyr	Ile	Pro 125	Val	His	Ile
Gln	Ser 130	Gln	Ile	Thr	Pro	His 135	Ala	Ile	Ile	Phe	Leu 140	Pro	Asn	Thr	Asp
Gly 145	Met	Glu	Met	Leu	Leu 150	Cys	Tyr	Glu	Asp	Glu 155	Gly	Val	Tyr	Val	Asn 160
Thr	Tyr	Gly	Arg	Ile 165	Ile	Lys	Asp	Val	Val 170	Leu	Gln	Trp	Gly	Glu 175	Met
Pro	Thr	Ser	Val 180	Ala	Tyr	Ile	Cys	Ser 185	Asn	Gln	Ile	Met	Gly 190	Trp	Gly
Glu	Lys	Ala 195	Ile	Glu	Ile	Arg	Ser 200	Val	Glu	Thr	Gly	His 205	Leu	Asp	Gly
Val	Phe 210	Met	His	Lys	Arg	Ala 215	Gln	Arg	Leu	Lys	Phe 220	Leu	Cys	Glu	Arg
Asn 225	Asp	Lys	Val	Phe	Phe 230	Ala	Ser	Val	Arg	Ser 235	Gly	Gly	Ser	Ser	Gln 240
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GIY 1	Lys	•		Leu 5			Pro		10		Glu			Pro 15	Leu
Ser	Ser	Phe	Val 20	His	Glu	Asp	Pro	Val 25	Glu	Val	Ala	Arg	Leu 30	His	Arg
Ala	Asp	Leu 35	Asn	Gly	Phe	Leu	Thr 40	Pro	Ala	His	Tyr	Leu 45	Val	Gly	Ala
_		 -		_	_	_		_	_	_	_				

Asp Val Gly His Arg Ser Arg His Leu Pro Pro Leu Gln His His Ile 50 55 60

Leu 65	Asn	Asp	Ala	Pro	Val 70	Arg	Val	Asp	Val	Asp 75	Thr	Leu	Val	Leu	Val 80
Ala	Gln	Gln	His	Leu 85	His	Ala	Val	Gly	Val 90	Gly	Glu	Glu	qsA	Asp 95	Gly
Met	Gly	Arg	Asp 100	Leu	Ala	Leu	Asp	Val 105	His	Arg	Asp	Val	Asp 110	Val	Ile
Ala	Val	Pro 115	Arg	Val	Asp	Ile	His 120	Ser	Met	Glu	Ala	Ser 125	Thr	Gly	Ala
Ile	Asp 130	Asp	Leu	Glu	Pro	Leu 135	Pro	Leu	Leu	Tyr	Cys 140	Gln	Val	Asp	Gln
Gln 145	Arg	Ala	Val	Gly	Glu 150	Val	Gly	Lys	Gly	Leu 155	Glu	Gly	His	Glu	Phe 160
Val	Val	Gly	Phe	Gly 165	Gly	Pro	Gly	Glu	Ala 170	Trp	Gly	Pro	Trp	Gly 175	Gly
Leu	Gly	Ala	Gly 180	Gly	Leu	Arg	Pro	Arg 185	Ala	Ala	Trp	Leu	Ala 190	Leu	Gly
Gln	Gly	Arg 195	Val	Leu	Leu	Leu	Val 200	His	Pro	Cys	Ser	Leu 205	Phe	Tyr	Leu
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Arg	Cys	Leu	Pro 20	Thr	Tyr	Pro	Ser	Arg 25	Ala	Gln	Pro	Ser	Asn 30	Val	Gly
Arg	Arg	Arg 35	Arg	Arg	Arg	Pro	Gly 40	Leu	Gly	Ala	Leu	Ala 45	Ala	Gly	Val
Pro	Ala 50	Met	Ala	Glu	Ser	Val 55	Glu	Arg	Leu	Gln	Gln 60	Arg	Val	Gln	Glu
Leu 65	Glu	Arg	Glu	Leu	Ala 70	Gln	Glu	Arg	Ser	Leu 75	Gln	Val	Pro	Arg	Ser 80
Gly	Asp	Gly	Gly	Gly 85	Gly	Arg	Val	Arg	Ile 90	Glu	Lys	Met	Ser	Ser	Glu

Leu

Met Ala Leu Lys

Ser Arg 105

Gly Ile Val Ser Asp Tyr Glu Lys Ile Arg Thr Phe Ala Val Ala Ile

Tyr

Pro

95

Arg

110

85

Asn

Ser

100

115 120 125

Val	Gly 130	Val	Gly	Gly	Val	Gly 135	Ser	Val	Thr	Ala	Glu 140	Met	Leu	Thr	Arg
Cys 145	Gly	Ile	Gly	Lys	Leu 150	Leu	Leu	Phe	Asp	Tyr 155	Asp	Lys	Val	Glu	Leu 160
Ala	Asn	Met	Asn	Arg 165	Leu	Phe	Phe	Gln	Pro 170	His	Gln	Ala	Gly	Leu 175	Ser
Lys	Val	Gln	Ala 180	Ala	Glu	His	Thr	Leu 185	Arg	Asn	Ile	Asn	Pro 190	Asp	Val
Leu	Phe	Glu 195	Val	His	Asn	Tyr	Asn 200	Ile	Thr	Thr	Val	Glu 205	Asn	Phe	Gln
His	Phe 210	Met	Asp	Arg	Ile	Ser 215	Asn	Gly	Gly	Leu	Glu 220	Glu	Gly	Lys	Pro
Val 225	Asp	Leu	Val	Leu	Ser 230	Cys	Val	Asp	Asn	Phe 235	Glu	Ala	Arg	Met	Thr 240
Ile	Asn	Thr	Ala	Cys 245	Asn	Glu	Leu	Gly	Gln 250	Thr	Trp	Met	Glu	Ser 255	Gly
Val	Ser	Glu	Asn 260	Ala	Val	Ser	Gly	His 265	Ile	Gln	Leu	Ile	Ile 270	Pro	Gly
Glu	Ser	Ala 275	Суз	Phe	Ala	Сув	Ala 280	Pro	Pro	Leu	Val	Val 285	Ala	Ala	Asn
Ile	Asp 290	Glu	Lys	Thr	Leu	Lys 295	Arg	Glu	Gly	Val	Cys 300	Ala	Ala	Ser	Leu
Pro 305	Thr	Thr	Met	Gly	Val 310	Val	Ala	Gly	Ile	Leu 315	Val	Gln	Asn	Val	Leu 320
Lys	Phe	Leu	Leu	Asn 325	Phe	Gly	Thr	Val	Ser 330	Phe	Tyr	Leu	Gly	Tyr 335	Asn
Ala	Met	Gln	Asp 340	Phe	Phe	Pro	Thr	Met 345	Ser	Met	Lys	Pro	Asn 350	Pro	Gln
Cys	Asp	Asp 355	Arg	Asn	Cys	Arg	Lys 360	Gln	Gln	Glu	Glu	Tyr 365	Lys	Lys	Lys
Val	Ala 370	Ala	Leu	Pro	Lys	Gln 375	Glu	Val	Ile	Gln	Glu 380	Glu	Glu	Glu	Ile
Ile 385	His	Glu	Asp	Asn	Glu 390	Trp	Gly	Ile	Glu	Leu 395	Val	Ser	Glu	Val	Ser 400
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Gly	Ile	Thr	Val 420	Ala	Tyr	Thr	Ile	Pro 425	Lys	Lys	Gln	Glu	Asp 430	Ser	Val
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Thr	Pro	Ser 35	Arg	Phe	Arg	Val	Phe 40	Ser	Ser	Ile	Phe	Ala 45	Ala	Thr	Thr
Ser	Gly 50	Gly	Ala	His	Ala	Lys 55	Gln	Ala	Asp	Ser	Pro 60	Gly	Ile	Ile	Ser
Cys 65	Ile	Cys	Pro	Glu	Thr 70	Ala	Phe	Ser	Leu	Thr 75	Pro	Asp	Ser	Ile	His 80
Val	Cys	Pro	Ser	Ser 85	Leu	Gln	Ala	Val	Phe 90	Ile	Val	Ile	Arg	Ala 95	Ser
Lys	Leu	Ser	Thr 100	Gln	Leu	Arg	Thr	Arg 105	Ser	Thr	Gly	Phe	Pro 110	Ser	Ser
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Gln	Gln 50	Ser	His	Tyr	Leu	Leu 55	His	Gln	His	Leu	Leu 60	Leu	Leu	Arg	Gln
Arg 65	Tyr	Gly	Phe	Ser	His 70	Ser	Arg	Leu	Gln	Phe 75	Pro	Phe	Val	Ser	Met 80
Pro	Ser	Ser	Gly	Cys 85	Arg	Asp	Ser	Asn	Pro 90	Pro	Pro	Leu	Ser	Ser 95	Ser
Ser	Arg	Cys	Gly 100	Pro	Gly	Arg	Pro	Leu 105	Arg	Arg	Arg	Ser	Ser 110	Gly	Pro
Ala	Asp	Ser 115	Ser	Pro	Gly	Gln	Val 120	Pro	Ala	Pro	Ala	Pro 125	Gly	Pro	Ala

Ala	Ala 130	Gly	Ala	Pro	Gln	Thr 135	Pro	Pro	Trp	Leu	Gly 140	Leu	Arg	Pro	Pro
Thr 145	Leu	Pro	Ala	Arg	Ala 150	Phe	Ala	Ala	Ala	Phe 155	Ala	Pro	Arg	Cys	Ser 160
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Phe	Ser	Ser	Leu 20	Gln	Ser	Gly	His	Leu 25	Ala	Ser	Gly	Ser	Gln 30	Ser	Pro
Glu	Ser	Thr 35	Lys	Ala	Pro	Gly	Thr 40	Pro	Pro	Thr	Pro	Ser 45	Tyr	Pro	Gly
Thr	Pro 50	Ser	Arg	Gln	Leu	Leu 55	Trp	Gln	Trp	Val	Gln 60	Pro	Arg	Pro	Ala
Leu 65	Pro	Ala	Ser	Ser	Pro 70	Cys	Ser	Arg	His	Gln 75	Leu	Tyr	Leu	Pro	Arg 80
Gln	Ala	Met	Ser	Trp 85	Leu	Leu	Ser	Pro	Ala 90	Pro	Ser	Val	Pro	Leu 95	Asp
Phe	Ser	Gly	Ala 100	Ser	Pro	Val	Trp	Ala 105	Thr	Leu	Cys	Phe	Pro 110	His	Pro
Arg	Leu	Pro 115	His	Arg											
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Ser	Thr	Ile	Cys 20	Ser	Pro	Arg	Leu	Leu 25	Arg	Gly	Gln	Pro	Ser 30	Leu	Gly
His	Pro	Leu 35	Phe	Pro	Ser	Ser	Ser 40	Ala	Pro	Thr	Gln	Val 45	Thr	Asp	Pro
Ala	Asp 50	Ser	Phe	Ser	Leu	Gly 55	Lys	Val	Gly	Cys	Cys 60	Leu	Thr	Ser	Pro
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Arg Leu Val Ser His Met 85

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Thr	Val	Ala 35	Tyr	Leu	Gly	Ser	Leu 40	Gly	Arg	Met	Glu	Trp 45	Val	Gly	Cys
Gln	Gly 50	Leu	Trp	Cys	Phe	Leu 55	Val	Ile	Gly	Thr	Leu 60	Met	Pro	Ser	Ala
His 65	Phe	Ala	Lys	Lys	Lys 70	Lys	Leu	Met	Thr	Leu 75	Leu	Pro	Trp	Leu	Leu 80
Ser	Met	Leu	Ala	Trp 85	Pro	Pro	Arg	Val	Gly 90	Gly	Thr	Ser	Pro	Leu 95	Leu
Ala	Glu	Ala	Gly 100	Glu	Gln	Val	Leu	Ser 105	Tyr	Asp	Pro	Ile	His 110	Gln	Ala
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Ser 145	Ser	Gln	Pro	Gly	Arg 150	Gly	Thr	Asn	Ala	Leu 155	Asn	Thr	Ser	Lys	Leu 160
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His

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Met	Leu		Leu							Ala	Val	Asn
			Asn									Ala

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Gly	Val	Glu 35	Arg	Phe	Ser	Leu	Ser 40	Asn	Thr	Ser	Ile	Leu 45	Cys	Arg	Pro
Lys	Gly 50	Arg	Thr	Trp	Gln	Gln 55	Gly	Ser	Gln	.Thr	Thr 60	Gln	Thr	Asn	Ile
Tyr 65															
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Gly	Ser	Phe	Glu 20	Asn	Val	Ser	Gly	Ser 25	Thr	Asp	Gly	Leu	Val 30	Asp	Ser
Ala	Gly	Thr 35	Gly	Asp	Leu	Ser	Asp 40	Gly	Tyr	Gln	Gly	Arg 45	Ser	Phe	Glu
Pro	Val 50	Gly	Thr	Arg	Pro	Arg 55	Val	Asp	Ser	Met	Ser 60	Ser	Val	Glu	Glu
Asp 65	Asp	Tyr	Asp	Thr	Leu 70	Thr	Asp	Ile	Asp	Ser 75	Asp	Lys	Asn	Val	Ile 80
Arg	Thr	Lys	Gln	Tyr 85	Leu	Tyr	Val	Ala	Asp 90	Leu	Ala	Arg	Lys	Asp 95	Lys
Arg	Val	Leu	Arg 100	Lys	Lys	Tyr	Gln	Ile 105	Tyr	Phe	Trp	Asn	Ile 110	Ala	Thr
Ile	Ala	Val 115	Phe	Tyr	Ala	Leu	Pro 120	Val	Val	Gln	Leu	Val 125	Ile	Thr	Tyr
Gln	Thr 130	Val	Val	Asn	Val	Thr 135	Gly	Asn	Gln	Asp	Ile 140	Cys	Tyr	Tyr	Asn
Phe 145	Leu	Cys	Ala	His	Pro 150	Leu	Gly	Asn	Leu	Ser 155	Ala	Phe	Asn	Asn	Ile 160
Leu	Ser	Asn	Leu	Gly 165	Tyr	Ile	Leu	Leu	Gly 170	Leu	Leu	Phe	Leu	Leu 175	Ile
Ile	Leu	Gln	Arg 180	Glu	Ile	Asn	His	Asn 185	Arg	Ala	Leu	Leu	Arg 190	Asn	Asp
Leu	Cys	Ala 195	Leu	Glu	Cys	Gly	Ile 200	Pro	Lys	His	Phe	Gly 205	Leu	Phe	Tyr
Ala	Met 210	Gly	Thr	Ala	Leu	Met 215	Met	Glu	Gly	Leu	Leu 220	Ser	Ala	Cys	Asp
	_	_	_	_	_			_			_		_	_	

His Val Cys Pro Asn Tyr Thr Asn Phe Gln Phe Asp Thr Ser Phe Met

225					230					235					240
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Pro	Asp	Ile	Asn 260	Ala	Ser	Ala	Tyr	Ser 265	Ala	Tyr	Ala	Cys	Leu 270	Ala	Ile
Val	Ile	Phe 275	Phe	Ser	Val	Leu	Gly 280	Val	Val	Phe	Gly	Lys 285	Gly	Asn	Thr
Ala	Phe 290	Trp	Ile	Val	Phe	Ser 295	Ile	Ile	His	Ile	Ile 300	Ala	Thr	Leu	Leu
Leu 305	Ser	Thr	Gln	Leu	Tyr 310	Tyr	Met	Gly	Arg	Trp 315	Lys	Leu	Asp	Ser	Gly 320
Ile	Phe	Arg	Arg	Ile 325	Leu	His	Val	Leu	Tyr 330	Thr	Asp	Cys	Ile	Arg 335	Gln
Cys	Ser	Gly	Pro 340	Leu	Tyr	Val	Asp	Arg 345	Met	Val	Leu	Leu	Val 350	Met	Gly
Asn	Val	Ile 355	Asn	Trp	Ser	Leu	Ala 360	Ala	Tyr	Gly	Leu	Ile 365	Met	Arg	Pro
Asn	Asp 370	Phe	Ala	Ser	Tyr	Leu 375	Leu	Ala	Ile	Gly	Ile 380	Cys	Asn	Leu	Leu
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Ala Arg

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Ala Ala Ala

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Leu

Leu Gln Ala

His

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Pro

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Leu

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Ala	Lys 450	Ser	Pro	Glu	Lys	Cys 455	Arg	Leu	Asp	Met	Ile 460	Pro	Asp	Leu	Lys
Ala 465	Met	Asn	Pro	Leu	Lys 470	Ala	Lys	Thr	Ala	Ser 475	Leu	Phe	Glu	Gln	Lys 480
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Phe 545	Thr	Asn	Pro	Cys	Lys 550	Thr	Met	Lys	Phe	Ile 555	Val	Trp	Arg	Arg	Phe 560
Lys	Trp	Val	Ile	Ile 565	Gly	Leu	Leu	Phe	Leu 570	Leu	Ile	Leu	Leu	Leu 575	Phe
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Thr	Thr	Ala 35	Trp	Met	Asn	Leu	Lys 40	Pro	Thr	Lys	Ser	Cys 45	Thr	Ser	Thr
Ser	Gly 50	Pro	Leu	Lys	Ser	Gly 55	Leu	Leu	Phe	Thr	Ser 60	Ser	Gly	Leu	Arg
Gly 65	Trp	Ser	Leu	Ser	Thr 70	Trp	Lys	Gln	Gly	Leu 75	Cys	Thr	Ala	Pro	Ser 80
Ser	Pro	Thr	Phe	Pro 85	Arg	Glu	Asn	Phe	Arg 90	Cys	Gly	Trp	Met	Phe 95	Ser
Pro	Arg	Val	Trp 100	Gly	His	Gln	Ala	Leu 105	Leu	Ser	Thr	Ser	His 110	Pro	Gly
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Glu	Met	Leu 35	Phe	Phe	Arg	Asn	Asp 40	Thr	Glu	Leu	Phe	Gly 45	Trp	Lys	Val
Val	Lys 50	Arg	Glu	Asn	Lys	Ser 55	Pro	Val	Lys	Ile	Pro 60	Phe	Thr	Ile	Gln
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Asn	Pro	Ala	Phe	Asp 85	Val	Asp	Val	Thr	His 90	Phe	Leu	Ser	Cys	Asp 95	Ala
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Val	Val	Phe 115	Leu	Gly	Phe	Pro	Gly 120	Cys	Asp	Val	Glu	Arg 125	Arg	Ala	Trp
Trp	Pro 130	Gln	Thr	Leu	Gly	Glu 135	Asn	Ile	His	Pro	His 140	Leu	Lys	Phe	Ser
Leu 145	Gly	Asn	Val	Gly	Leu 150	Glu	Gly	Ala	Val	Gln 155	Ser	Pro	Cys	Phe	His 160
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Glu	Ser	Val	Phe 260	Gln	Ile	Asn	Asn	Cys 265	Phe	Ser	Tyr	Phe	Phe 270	Ile	Pro
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Pro Val

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Trp	Leu	Gly 115	Trp	Leu	Asp	Leu	Arg 120	Gln	Ser	Trp	Ala	Leu 125	Ser	Ile	Ser
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Glu	Phe	Leu	Ala	Thr 165	Glu	Arg	Thr	Gln	Pro 170	Leu	Ile	Leu	Ala	Gln 175	Phe
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Cys	Leu 50	Cys	Trp	Val	Met	Pro 55	Leu	Met	Leu	Arg	Thr 60	Arg	Arg	Val	Arg
Ser 65	Leu	Phe	Thr	Pro	Gly 70	Leu	Ser	Ser	His	Ser 75	Arg	Arg	Arg	Met	Phe 80
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Ala	Thr	Arg 115	Ile	Lys	Pro	Gly	Tyr 120	Leu	Leu	Gln	Arg	Glu 125	Met	Ile	Ser

Ala	Arg 130	Glu	Met	Leu	Gly	Ala 135	Met	Leu	Arg	Met	Lys 140	Arg	Glu	Gln	Val
Leu 145	Cys	Ser	Gly	Arg	Gly 150	Leu	His	Ser	Ser	Pro 155	Ala	Ala	Ser	Leu	Gly 160
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Phe	Met	Arg 35	Asn	Ile	Ala	Pro	Asn 40	Ile	Ser	Arg	Ala	Glu 45	Ile	Ile	Ser
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Ser	Val	Asn	Ile	Lys 85	Glu	Ile	Cys	Trp	Asn 90	Leu	Gln	Asn	Ile	Arg 95	Leu
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Gln 145	Leu	Trp	Ala	Ser	Glu 150	Pro	Gly	Thr	Pro	Pro 155	Leu	Pro	Thr	Ser	Leu 160
Pro	Ser	Gln	Asn	Pro 165	Ile	Leu	Lys	Asn	Ile 170	Thr	Asp	Tyr	Leu	Ile 175	Glu
Glu	Val	Ser	Ala 180	Glu	Glu	Glu	Glu	Leu 185	Leu	Gly	Ser	Ser	Gly 190	Gly	Ala
Pro	Pro	Glu 195	Glu	Pro	Pro	Lys	Glu 200	Gly	Asn	Pro	Ala	Glu 205	Ile	Asn	Val
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Lys	Lys	Glu 355	Val	Ala	Phe	Phe	Asn 360	Asn	Phe	Leu	Thr	Asp 365	Ala	Lys	Arg
Pro	Ala 370	Leu	Pro	Glu	Ile	Lys 375	Pro	Ala	Gln	Pro	Pro 380	Gly	Pro	Ala	Gln
Ile 385	Leu	Pro	Pro	Gly	Leu 390	Thr	Pro	Gly	Leu	Pro 395	Tyr	Pro	His	Gln	Thr 400
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Arg	His 50	Lys	Asp	Thr	Ser	Ser 55	Gly	Asp	His	Leu	Thr 60	Cys	Arg	Leu	Asp
Pro 65	Gln	Ala	Lys	Asp	Leu 70	Lys	Asp	Gly	Thr	Gln 75	Glu	Glu	Ala	Thr	Lys 80
Arg	Gln	Glu	Ala	Pro 85	Val	Asp	Pro	Arg	Pro 90	Glu	Gly	Asp	Pro	Gln 95	Arg
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Glu	Leu	Pro 115	Ser	Arg	Arg	Ala	Glu 120	Val	Pro	Thr	Lys	Pro 125	Pro	Leu	Pro
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Ala	Ser	Ser 35	Asn	Ser	Phe	Leu	Arg 40	Pro	Lys	Ile	His	Met 45	Val	Ser	Ser
Ala	Ser 50	Ile	Ser	Val	Arg	Pro 55	Arg	Pro	Asn	His	Ser 60	Leu	Lys	Asp	Leu
Asp 65	Thr	Gly	Phe	Ser	Ser 70	Ser	Trp	Pro	His	Ala 75	Asn	Leu	Arg	Tyr	Pro 80
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His	Arg 50	Val	Ile	Asn	Asn	Leu 55	Leu	Tyr	Tyr	Gln	Thr 60	Asn	Tyr	Leu	Leu
Cys 65	Phe	Gly	Ile	Gly	Leu 70	Ala	Leu	Ala	Gly	Tyr 75	Val	Arg	Pro	Leu	His 80
Thr	Leu	Leu	Ser	Ala 85	Leu	Val	Val	Ala	Val 90	Ala	Leu	Gly	Val	Leu 95	Val
Trp	Ala	Ala	Glu 100	Thr	Arg	Ala	Leu	Cys 105	Ala	Ala	Ala	Ala	Ala 110	Ala	Thr
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Pro	Asn	Val	Pro 100	His	His	Arg	Gln	Pro 105	Arg	Gly	Glu	Val	Gly 110	Thr	Gly
Leu	Ser	Arg 115	Glu	Trp	Gly	Val	Tyr 120	Val	Ser	Val	Ala	Ala 125	Thr	Ile	Lys
Pro	Val 130	Ala	Ser	Leu	Met	Pro 135	Lys	Lys	Lys	Lys	Lys 140	Ser	Thr	Gly	Arg
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Trp	Lys	Val 115	Gly	Trp	Gly	Leu	Glu 120	Lys	Leu	Trp	Ser	Arg 125	Val	Gln	Asp
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Gly	Asp	Lys 35	Asn	Lys	Ile	Gln	Lys 40	Leu	Val	Gln	Met	Ala 45	Trp	Thr	Phe
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Ile 65	Ile	Ala	Val	Ala	Val 70	Met	Tyr	Leu	Ala	Gly 75	Arg	Leu	Cys	Lys	Phe 80
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Gln	Ile	Leu 115	Asp	Leu	Tyr	Ser	Gln 120	Gly	Lys	Gln	Gln	Met 125	Pro	His	His
Thr	Pro 130	His	Gln	Leu	Gln	Gln 135	Pro	Pro	Ser	Pro	Glu 140	Pro	Pro	Thr	Pro
Leu 145	Pro	Gly	Pro	Cys	Gly 150	Cys	Trp	Ala	Ser	His 155	Leu	Lys	Glu	Gly	Lys 160
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Arg	Ser	Thr 35	Phe	Trp	Lys	Thr	Ser 40	Ala	Thr	Lys	Ser	Trp 45	Ile	Phe	Thr
His	Lys 50	Glu	Asn	Asn	Arg	Cys 55	Leu	Ile	Thr	Pro	Pro 60	Ile	Ser	Cys	Asn
Ser 65	Pro	His	Leu	Leu	Ser 70	Leu	Pro	Pro	Arg	Cys 75	Leu	Gly	Pro	Val	Val 80
Ala	Gly	Pro	Pro	Thr 85	Ser	Arg	Arg	Gly	Arg 90	Leu	Tyr	Ser	Pro	Asn 95	Pro
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Gln	Glu	Met	Gly 20	Ala	Val	Ala	Ala	Asp 25	Gly	Gly	Cys	Asp	Glu 30	Ala	Ser
Val	Val	Phe 35	Leu [·]	Val	Ser	Lys	Asp 40	Pro	Gly	Phe	Gly	Gly 45	Arg	Cys	Leu
Pro	Lys 50	Arg	Arg	Pro	Gly	His 55	Leu	Glu	Gln	Thr	Ala 60	Pro	Thr	Ile	Ser

Tyr 65	Thr	Trp	Val	Trp	Arg 70	Ser	Ile	Leu	Val	Phe 75	Gln	Ile	Cys	Thr	Asn 80
Val	Leu	Arg	Asp	Thr 85	Ser	Leu	Leu	Leu	Leu 90						
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Met	Glu	Ala	Val 20	Trp	Lys	Glu	Ala	Lys 25	Pro	Glu	Asp	Leu	Met 30	Asp	Ser
Lys	Leu	Arg 35	Cys	Val	Phe	Glu	Leu 40	Pro	Ala	Glu	Asn	Asp 45	Lys	Pro	His
Asp	Val 50	Glu	Ile	Asn	Lys	Ile 55	Ile	Ser	Thr	Thr	Ala 60	Ser	Lys	Thr	Glu
Thr 65	Pro	Ile	Val	Ser	Lys 70	Ser	Leu	Ser	Ser	Ser 75	Leu	Asp	Asp	Thr	Glu 80
Val	Lys	Lys	Val	Met 85	Glu	Glu	Cys	Lys	Arg 90	Leu	Gln	Gly	Glu	Val 95	Gln
Arg	Leu	Arg	Glu 100	Glu	Asn	Lys	Gln	Phe 105	Lys	Glu	Glu	Asp	Gly 110	Leu	Arg
Met	Arg	Lys 115	Thr	Val	Gln	Ser	Asn 120	Ser	Pro	Ile	Ser	Ala 125	Leu	Ala	Pro
Thr	Gly 130	Lys	Glu	Glu	Gly	Leu 135	Ser	Thr	Arg	Leu	Leu 140	Ala	Leu	Val	Val
Leu 145	Phe	Phe	Ile	Val	Gly 150	Val	Ile	Ile	Gly	Lys 155	Ile	Ala	Leu		
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Asn	Thr	Arg	Leu 20	Ser	Leu	Met	Thr	Ser 25	Thr	Ser	Asp	Ala	Ala 30	Thr	Val
Gln	Phe	Leu 35	Trp	Ala	Ser	Asp	Ser 40	Val	His	Gln	Ser	Gln 45	Gly	Ala	Asp
Gly	Leu 50	Asp	Arg	Thr	Glu	Asp 55	Thr	Glu	Ser	Ser	Leu 60	Gly	Arg	Glu	Trp

Ala 65	Thr	Trp	Gly	Leu	Leu 70	Cys	Gly	Ala	Asp	Arg 75	Thr	Pro	Gln	His	Ala 80
Gly	Leu	Gln	Leu	Pro 85	Lys	Gly	Gln	His	Gln 90	Gln	Ala	Arg	Lys	Gly 95	Val
Ile	Leu	Arg	Glu 100	Val	Ile	Gln	His	His 105	Val	Pro	Arg	Pro	Thr 110	Asn	Val
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His	Met	Val	Met 20	Ile	Asn	Leu	Asn	Pro 25	Met	Ile	Trp	Trp	Ile 30	His	Gln
Ser	Asn	Leu 35	Pro	Ser	Cys	Ala	Cys 40	Tyr	Leu	Tyr	Lys	Ala 45	Ile	Phe	Pro
Ile	Ile 50	Thr	Pro	Thr	Ile	Lys 55	Asn	Lys	Thr	Thr	Arg 60	Ala	Lys	Ser	Arg
Val 65	Leu	Arg	Pro	Ser	Ser 70	Phe	Pro	Val	Gly	Ala 75	Asn	Ala	Glu	Met	Gly 80
Leu	Leu	Leu	Cys	Thr 85	Val	Phe	Leu	Ile	Arg 90	Ser	Pro	Ser	Ser	Ser 95	Leu
Asn	Cys	Leu	Phe 100	Ser	Ser	Arg	Ser	Leu 105							
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Pro	Ala	Ala	Leu 20	Pro	Gln	Pro	Leu	Trp 25	Glu	Leu	Pro	Arg	Ala 30	His	Gly
Ser	Gln	Arg 35	Gln	Pro	Gly	Pro	Gly 40	Glu	Ala	Ala	Asp	His 45	Ala	Glu.	Gln
Glu	Arg 50	Glu	Glu	Ala	Ala	Glu 55	Arg	Pro	Gly	Ser	Ser 60	Pro	Glu	Glu	Gly
Gln 65	Glu	Gly	Ser	Gly	Ala 70	Phe	Gly	Gly	His	Thr 75	Gly	His	Arg	Ala	Cys 80
Ala	Arg	Cys	Leu	Gly 85	Arg	Gly	Ala	Leu	Gly 90	Gly	Arg	Ile	Pro	Cys 95	Gly

Leu Leu Cys Gln Leu Phe Arg Arg Asp Gly Cys Pro Ala Asp Ser Glu

100 105 110

Val Gln His His Ile His Gln His Trp Gln Gln Leu Leu Pro 115 120 125

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<212> PRT

<213> homo sapiens

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Cys Cys Glu Ala Gln Ala Arq Ala Gly Ala Ala Ser Asn Gly Arg 1 10 15 Leu Asn Ala Ser Leu Asp Gly Leu His Asn Ala Leu Phe Ala Thr Gln 20 25 30 Phe Ser Leu Glu Gln His Gln Arg Leu Phe His Ser Leu Gly Asn Arg 35 40 45 Phe Gln Gly Leu Met Glu Ala Asn Val Ser Leu Asp Leu Gly Lys Leu 50 55 60 Gln Arq Lys Gly Gln Gln Lys Asp Leu Glu Thr Met Leu Ser Lys Lys 65 70 75 80 Asp Lys Glu Ala Glu Pro Leu Val Asp Ile Ala Pro Lys Arg Lys Arq 85 90 Gly Val Thr Pro Val Gly Ala Leu Gly Ala Ala Leu Trp Glu Pro Arg 100 105 110 Tyr Phe Glu Gly Thr Ala Ala Gly Ser Pro Val Ala Phe Ala Ser Ser 115 120 125 Ile Ala Leu Gln Thr Phe Thr Thr Tyr Asn Ile Gly Ser Val Lys Asn 130 135 140 Ser Pro Glu His Gly Tyr Phe Arg Ala Pro Glu Arg Gly Val 145 150 155 160 Thr Tyr Leu Phe Ala Val Ser Val Glu Phe Gly Pro Gly Pro Gly Gly 165 170 175 Leu Val Phe Gly Gly His His Arq Thr Pro Val Cys Thr 180 185 190 Gly Ser Ala Thr Val Phe Ala Met Ala Glu Leu Gln Gly Ser Thr 195 200 205 Gly Gly Val Phe Glu Leu Thr Gln Ser Ile Thr Lys Glu Arg Trp Lys 210 215 220 Gly Ser Gly Arq Leu Ser Gly Thr Ala Phe Phe Leu Met Phe Lys Thr 225 230 235 240

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<213> homo sapiens

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Leu	Arg	Phe 35	Leu	Leu	Val	Pro	Leu 40	Pro	Gly	Ser	Phe	Gln 45	Val	Phe	Leu
Leu	Leu 50	Leu	Pro	Phe	Pro	Ala 55	Gln	His	Gly	Leu	Gln 60	Leu	Pro	Gln	Val
Gln 65	Ala	Asp	Val	Gly	Phe 70	His	Glu	Pro	Leu	Glu 75	Val	Pro	Lys	Glu	Ala 80
Val	Glu	Glu	Pro	Leu 85	Val	Leu	Leu	Gln	Ala 90	Ala	Leu	Ser	Gly	Glu 95	Glu
Cys	Val	Val	Glu 100	Ala	Val	Lys	Gly	Gly 105	Val	Glu	Gly	Gly	Gly 110	Pro	Gly
Pro	Gly	Leu 115	Gly	Leu	Ala	Ala	Pro 120	Pro	Asp	Ile					
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		Thr Gln	Thr Lys 20	5	Val Ser		Pro Gln	Leu Thr 25	10	Phe Leu				-	
1			Lys	5 Asp		Phe		Thr	10 Ala		Cys	Ser	Leu	15	
1 Arg	Lys	Gln	Lys 20 Lys	5 Asp Gln	Ser	Phe Ala	Gln	Thr 25 Thr	10 Ala Gly	Leu Lys	Cys Ala	Ser His 45	Leu 30 Val	15 His	Cys
1 Arg Ser	Lys Phe Tyr 50	Gln Pro 35	Lys 20 Lys Ser	5 Asp Gln Glu	Ser Ala Val	Phe Ala Leu 55	Gln Ser 40	Thr 25 Thr	10 Ala Gly His	Leu Lys Gly	Cys Ala Val 60	Ser His 45	Leu 30 Val Leu	15 His Val Leu	Cys
Arg Ser Pro	Lys Phe Tyr 50 Ser	Gln Pro 35 Phe Lys	Lys 20 Lys Ser	5 Asp Gln Glu	Ser Ala Val	Phe Ala Leu 55	Gln Ser 40 Leu	Thr 25 Thr	10 Ala Gly His	Leu Lys Gly Leu	Cys Ala Val 60	Ser His 45 Thr	Leu 30 Val Leu	15 His Val Leu	Cys Thr Ser
Arg Ser Pro Glu 65	Lys Phe Tyr 50 Ser Ser 310 128 PRT	Gln Pro 35 Phe Lys	Lys 20 Lys Ser Phe	5 Asp Gln Glu	Ser Ala Val	Phe Ala Leu 55	Gln Ser 40 Leu	Thr 25 Thr	10 Ala Gly His	Leu Lys Gly Leu	Cys Ala Val 60	Ser His 45 Thr	Leu 30 Val Leu	15 His Val Leu	Cys Thr Ser
1 Arg Ser Pro Glu 65 Thr <210> <211> <212>	Lys Phe Tyr 50 Ser Ser 310 128 PRT homo	Gln Pro 35 Phe Lys	Lys 20 Lys Ser Phe	5 Asp Gln Glu	Ser Ala Val	Phe Ala Leu 55	Gln Ser 40 Leu	Thr 25 Thr	10 Ala Gly His	Leu Lys Gly Leu	Cys Ala Val 60	Ser His 45 Thr	Leu 30 Val Leu	15 His Val Leu	Cys Thr Ser
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Ala Ala Leu

Pro

Asn

55

Leu

10

Gly

Ser

Ala Arg

Trp

Cys

25

Arg

Leu

Phe

40

Glu Phe

Pro Gly Gly Gln

Gly

Thr

45

Leu

30

Ser

Arg

Leu

40

Phe

Leu

Leu Val

Gly

Leu

Phe

Glu

55

45

Gly

Asn

Ser

Pro

Pro Ser

Thr

Gln

Gln

Asp

Leu

Ile

Lys

Lys

Val

Val

Ala

Val

Lys

80

80

Pro

Ala

Gln

Lys

Ser

Cys

Gly

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Asp

Cys

Trp

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Thr

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Phe

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Ile

Leu

Pro

 \mathtt{Trp}

Gly

Ile Ala Leu

Ser

Asp

Lys

50

Gly Gly

Arg

35

Tyr Ser

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Ala	Val	Glu	Pro 20	Ser	Gly	Leu	Cys	Val 25	Val	Ala	Glu	Asp	Ser 30	Val	Ser
Ala	Thr	Val 35	Phe	Arg	Glu	Thr	Ser 40	Gly	Arg	Asp	Ser	His 45	Leu	Gly	Asn
Ser	Asn 50	Thr	Gln												
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Arg	Lys	Phe	Pro 20	Gly	Lys	Arg	Ser	Leu 25	Thr	Gln	Ser	Pro	Arg 30	Leu	Pro
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Arg	Gly	Gly	Arg 20	Gly	Arg	Gly	Met	Gly 25	Arg	Gly	Asp	Gly	Phe 30	Asp	Ser
Arg	Gly	Lys 35	_	Glu	Phe	Asp	Arg 40	His	Ser	Gly	Ser	Asp 45	Arg	Ser	Gly
Leu	Lys 50	His	Glu	Asp	Lys	Arg 55	Gly	Gly	Ser	Gly	Ser 60	His	Asn	Trp	Gly
Thr 65	Val	Lys	Asp	Glu	Leu 70	Thr	Glu	Ser		Lys 75	Tyr	Ile	Gln	Lys	Gln 80
Ile	Ser	•	Asn	Tyr 85		Asp		_	Gln 90		Asn		Thr	Glu 95	Glu
Thr		Glu	100		Glu			Pro 105		Ala		Thr	Glu 110	Asn	•
Glu	Asn	Glu 115	Val	Glu	Glu	Val	Lys 120	Glu	Glu	Gly	Pro	Lys 125	Glu	Met	Thr

Leu	Asp 130	Glu	Trp	Lys	Ala	Ile 135	Gln	Asn	Lys	Asp	Arg 140	Ala	Lys	Val	Glu
Phe 145	Asn	Ile	Arg	Lys	Pro 150	Asn	Glu	Gly	Ala	Asp 155	Gly	Gln	Trp	Lys	Lys 160
Gly	Phe	Val	Leu	His 165	Lys	Ser	Lys	Ser	Glu 170	Glu	Ala	His	Ala	Glu 175	Asp
Ser	Val	Met	Asp 180	His	His	Phe	Arg	Lys 185	Pro	Ala	Asn	Asp	Ile 190	Thr	Ser
Gln	Leu	Glu 195	Ile	Asn	Phe	Gly	Asp 200	Leu	Gly	Arg	Pro	Gly 205	Arg	Gly	Gly
Arg	Gly 210	Gly	Arg	Gly	Gly	Arg 215	Gly	Arg	Gly	Gly	Arg 220	Pro	Asn	Arg	Gly
Ser 225	Arg	Thr	Asp	Lys	Ser 230	Ser	Ala	Ser		235	Asp	Val	Asp	Asp	Pro 240
Glu	Ala	Phe	Pro	Ala 245	Leu	Ala									
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Trp	Phe	Ser	Asp 20	Ile	Lys	Phe	Tyr	Phe 25	Сув	Pro	Val	Leu	Ile 30	Leu	Asn
Ser	Leu	Pro 35	Leu	Ile	Gln	Ser	His 40	Leu	Phe	Trp	Thr	Leu 45	Leu	Phe	Tyr
Leu	Phe 50	Asn	Phe	Ile	Leu	Leu 55	Ile	Phe	Ser	Val	Cys 60	His	Trp	Met	Met
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Gln	Gly	Met	Leu 20	Arg	Ala	Leu	Leu	Gly 25	Arg	Gln	Leu	Phe	Arg 30	Ala	Arg
Gly	Pro	Pro 35	Val	Val	Arg	Glu	Pro 40	Leu	Pro	Arg	Thr	Thr 45	Arg	Leu	Ala
Val	Arg 50	His	Val	Trp	Pro	Pro 55	Cys	Asp	Arg	Pro	Leu 60	Arg	Val	Gly	Pro
Gly 65	Ser	Pro	Leu	Pro	Pro 70	Gly	Pro	Leu	His	Met 75	His	Leu	Leu	Pro	Ala 80
Pro	Ala	His	Gln	Gly 85	Val	Leu	Pro	Gly	Ala 90	Arg	Arg	Gln	Ala	Leu 95	Leu
Pro	Ala	Leu	Leu 100	Pro	Glu	Ala	Leu	Arg 105	Leu	Thr	Ala	Arg	Ser 110	Ala	Arg
Pro	Leu	Pro 115	Arg	Arg	Pro	Arg	Pro 120	Pro	Gly	Lys	Ala	Gly 125	Ser	Ser	Arg
Pro	Arg 130	Gly	Leu	Ala	Leu	Arg 135	Ala	Gly	Gly	Pro	Thr 140	His	Trp	Arg	Ala
Pro 145	Pro	Leu	Arg	Tyr	Tyr 150	Glu	Ser	Ser	Gly	Val 155	Lys	Phe	Arg	Asn	Gly 160
Pro	Ala	Arg	Pro	Lys 165	Pro	Thr	Arg	Pro	Gln 170	Ser	Gly	Leu	His	Thr 175	Asp
Lys	Asn	Ser	Arg 180	Ala	Gly	Leu	His	Ser 185	Ile	Pro	Thr	Leu	Glu 190	Gly	Ala
Pro	Leu	Leu 195	Gly	Glu	Gly	Pro	Cys 200	Asn	Ser	Ser	Glu	Ser 205	Glu	Ala	Arg
Pro	Gly 210	Arg	Pro	Cys	Ser	Leu 215	His	Pro	His	Cys	Ser 220	Val	His	Phe	Phe
Tyr 225	Leu	His	Lys	His	Thr 230	His	Ser	Thr	Ser	Lys 235					

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Glu

Arg

130

Arg

Asp

Val Val

Ile

135

Gln Asp Gly

Ala

Leu

140

Ala Ala Leu

Ala

330 325 335 Phe Gly Asp Glu Gly Phe His Glu Arg Glu Gly Arg Pro Tyr Cys Arg 340 345 350 Phe Ala Pro Gln Gly Cys Asp Phe Leu Gln Leu Arg Cys Gln Gly Arg 360 355 365 Trp Pro Ile Leu Asp Asn Tyr Ile Ser Ala Leu Ser Ala Leu His Pro 370 375 380 Asp Cys Phe Val Cys Arg Glu Cys Phe Ala Pro Phe Ser Gly Gly Ser 385 390 395 400 Phe Phe Glu His Glu Gly Arq Pro Leu Cys Glu Asn His Phe His Ala 405 410 415 Gly Gly Ser Ala Thr Cys Thr Arg Arg Leu Cys Leu Pro Val Gly Arg 425 Gly Phe Cys Val Ser Ala Leu Arg Arg His Pro Asp His Phe Thr Cys 435 440 445 Thr Phe Cys Leu Arg Pro Leu Thr Lys Gly Ser Phe Gln Glu Arq Ala 450 455 460 Lys Gly Gln Pro Phe Leu Phe Pro Tyr Cys Cys Leu Lys Gly 465 470 475 <210> 320 <211> 285 <212> PRT <213> homo sapiens <400> 320 Gly Glu Gln Gly Leu Gly Val Thr Arg Leu Phe Arg Trp Arg Glu Ala 1 10 15 Ala Ser Gly Gly Glu Gly Glu Pro Ser Gly Leu Ser Ala Glu 20 25 Gly Gln Glu Ala Gly Leu Ala Val Gly Leu Ala Ala Leu Leu Glu Gly 35 45 Gly Gly Pro Glu Arg Ala Gln Ala Glu Ala Cys Glu Val Val Arq 55 60 Val Glu Ala Thr Gln Gly Ala Ala Arg His Ala Ala Gly His Arg Glu 65 70 75 80 Ala Thr Gly Ala Gln Ser Cys Val Glu Val Val Arg Arg Ala Ala Leu 85 90 Gln Arg Ala Ala Ala Leu Val Leu Glu Lys Ala Ala Ser Arg Glu Gly 100 105 110 Arq Glu Ala Glu Pro Phe Pro Ala Asp Thr Val Arg Val Glu Arg Ala 115 120 125

Ala 145	Arg	Gly	Glu	Gln	Leu 150	Gln	Glu	Val	Pro	Ala 155	Ala	Val	Gly	Ala	Ala 160
Leu	Ala	Leu	Val	Glu 165	Thr	Leu	Ile	Ser	Glu 170	Gly	Leu	Pro	Ala	Thr 175	Asp
Ala	Ala	Glu	Met 180	Leu	Trp	Val	Pro	Val 185	Ser	Ala	Gln	Gly	Gly 190	His	His
Leu	Val	Ser 195	Asp	Gly	Leu	Val	Ala 200	Glu	Ala	Thr	Ser	Trp 205	Arg	Glu	Ala
Leu	Lys 210	Val	Ala	Leu	Gly	Ala 215	Glu	Gly	Gly	Ser	Ile 220	Leu	Leu	Glu	Glu
Ala 225	Ala	Ala	Ser	Gln	Gly 230	Gly	Gly	Thr	Ala	Ser 235	Ala	Asn	Glu	Val	Leu 240
Gly	Val	Pro	Gly	Ala 245	Ala	Gln	Ser	Arg	His 250	His	Leu	Pro	Ser	Asn 255	Arg
Phe	Ile	Ala	Gly 260	Ala	Thr	Glu	Ala	Phe 265	Gly	Leu	Gly	Gly	Asn 270	Thr	Pro
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Gly	Leu	His Glu		5				_	10	Gln Pro			Glu Cys 30		
Gly 1 Val	Leu	Glu	Glu 20	5 Gly	Gln	Ala	Leu	Thr 25	10 Glu		Lys		Cys	15 Gly	Ala
Gly 1 Val Gln	Leu Arg	Glu Gly 35	Glu 20 Ala	5 Gly Gln	Gln His	Ala Arg	Leu	Thr 25 Leu	10 Glu	Pro Pro	Lys Cys	Ser Pro 45	Cys 30	15 Gly Gly	Ala
Gly 1 Val Gln	Leu Arg Gly Leu	Glu Gly 35 Gly	Glu 20 Ala Leu	5 Gly Gln	Gln His Gln	Ala Arg Pro	Leu Gly 40	Thr 25 Leu Ile	10 Glu Thr Pro	Pro Pro Ala	Lys Cys Leu 60	Ser Pro 45 Ser	Cys 30 Thr	Gly Gly Ser	Ala Asn
Gly 1 Val Gln Gly Arg	Leu Arg Gly Leu 50	Glu Gly 35 Gly Asp	Glu 20 Ala Leu Ser	5 Gly Gln Ala	Gln His Gln Leu 70	Ala Arg Pro 55	Leu Gly 40 Lys	Thr 25 Leu Ile	10 Glu Thr Pro	Pro Pro Ala Ser 75	Lys Cys Leu 60	Ser Pro 45 Ser	Cys 30 Thr Asn	Gly Gly Ser	Ala Asn Trp
Gly Val Gln Gly Arg 65	Leu Arg Gly Leu 50 Val	Glu Gly 35 Gly Asp	Glu 20 Ala Leu Ser	Gly Gln Ala Val	Gln His Gln Leu 70	Ala Arg Pro 55	Leu Gly 40 Lys Cys	Thr 25 Leu Ile	10 Glu Thr Pro Val	Pro Pro Ala Ser 75	Lys Cys Leu 60 Ser	Ser Pro 45 Ser	Cys 30 Thr Asn	Gly Gly Ser Phe Cys	Ala Asn Trp His
Gly Val Gln Gly Arg 65	Leu Arg Gly Leu 50 Val Val Arg 322 99 PRT	Glu Gly 35 Gly Asp Glu Pro	Glu 20 Ala Leu Ser	Gly Gln Ala Val	Gln His Gln Leu 70	Ala Arg Pro 55	Leu Gly 40 Lys Cys	Thr 25 Leu Ile	10 Glu Thr Pro Val	Pro Pro Ala Ser 75	Lys Cys Leu 60 Ser	Ser Pro 45 Ser	Cys 30 Thr Asn	Gly Gly Ser Phe Cys	Ala Asn Trp His
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Asp	Leu	Ser	Leu 20	Arg	Leu	Arg	Leu	Gln 25	Asn	Pro	His	Ser	Ile 30	Cys	Tyr
Ile	Ser	Gln 35	Gly	Trp	Gly	Gln	Gly 40	Ser	Cys	Glu	Gln	Lys 45	Glu	Lys	Tyr
Gln	Leu 50	Leu	Lys	Gly	Leu	Gly 55	Phe	Val	Gly	Arg	Ala 60	Arg	Gln	Gly	Gln
Arg 65	Gly	Ile	Gln	Asn	Lys 70	Gly	Ala	Ser	Thr	Ser 75	Ala	Trp	Asp	Gly	Pro 80
Ile	His	Ser	Gly	Arg 85	Gly	Cys	Gly	Val	Ser 90	Pro	Val	Leu	Arg	Asn 95	His
Leu	Ala	Ser													
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Gly	Thr	Tyr	Thr 20	Gln	Glu	Asp	Glu	Ser 25	Ser	Leu	Ala	Ser	Glu 30	Ser	Asp
Cys	Leu	Pro 35	Gln	Thr	Pro	Pro	Gln 40	Asn	Arg	Leu	Leu	Ser 45	His	Leu	Pro
Leu	His 50	Ser	Asp	Lys	Thr	Gln 55	Ala	His	Ile	Pro	Gly 60	Pro	Gly	Val	Phe
Ala 65	Cys	Ile	Cys	Ile	Asp 70	Gly	Asn	Ala	Gly	Pro 75	Ala	Lys	Ala	Phe	Phe 80
Tyr	Ile	Lys													
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Ser	Lys	Pro	Gly 20	Leu	Ile	Val	Pro	Ile 25	Gly	Asp	Glu	Gly	Gly 30	Met	Arg
Arg	Ser	His 35	Leu	Gln	Leu	Leu	Ser 40	Val	Glu	Arg	Thr	Ser 45	Gly	Thr	Glu
Lys	Asn 50	Arg	Gly	Pro	His	Gly 55	Ser	Leu	Glu	Gly	Arg 60	Gly	Thr	Arg	Val
Gly 65	Glu	Leu	Ile	Ala	Glu 70	Arg	Arg	Asp	Val	Gln 75	Arg	Pro	Ser	Ala	Pro 80

Leu	Ser	Trp	Asp	Val 85	Asn	Arg	Ile	Phe	Pro 90	Ser	Thr	Pro	Ser	Leu 95	Pro
Pro	Val	Leu	Pro 100	Leu	Phe	Phe	Phe	Pro 105	Ser	Ile	Lys	Arg	Cys 110	Ile	
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Lys	Asn	Glu	Gly 20	Pro	Ser	Lys	Ala	Phe 25	Val	Asn	Cys	Asp	Glu 30	Asn	Ser
Arg	Leu	Val 35	Ser	Leu	Thr	Leu	Asn 40	Leu	Val	Thr	Arg	Ala 45	Asp	Glu	Gly
Trp	Tyr 50	Trp	Cys	Gly	Val	Lys 55	Gln	Gly	His	Phe	Tyr 60	Gly	Glu	Thr	Ala
Ala 65	Val	Tyr	Val	Ala	Val 70	Glu	Glu	Arg	Lys	Ala 75	Ala	Gly	Ser	Arg	Asp 80
Val	Ser	Leu	Ala	Lys 85	Ala	Asp	Ala	Ala	Pro 90	Asp	Glu	Lys	Val	Leu 95	Asp
Ser	Gly	Phe	Arg 100	Glu	Ile	Glu	Asn	Lys 105	Ala	Ile	Gln	Asp	Pro 110	Arg	Leu
Phe	Ala	Glu 115	Glu	Lys	Ala	Val	Ala 120	Asp	Thr	Arg	Asp	Gln 125	Ala	Asp	Gly
Ser	Arg 130	Ala	Ser	Val	Asp	Ser 135	Gly	Ser	Ser	Glu	Glu 140	Gln	Gly	Gly	Ser
Ser 145	Arg	Ala	Leu	Val	Ser 150	Thr	Leu	Val	Pro	Leu 155	Gly	Leu	Val	Leu	Ala 160
Val	Gly	Ala	Val	Ala 165	Val	Gly	Val	Ala	Arg 170	Ala	Arg	His	Arg	Lys 175	Asn
Val	Asp	Arg	Val 180	Ser	Ile	Arg	Ser	Tyr 185	Arg	Thr	Asp	Ile	Ser 190	Met	Ser
Asp	Phe	Glu 195	Asn	Ser	Arg	Glu	Phe 200	Gly	Ala	Asn	Asp	Asn 205	Met	Gly	Ala
Ser	Ser 210	Ile	Thr	Gln	Glu	Thr 215	Ser	Leu	Gly	Gly	Lys 220	Glu	Glu	Phe	Val
Ala 225	Thr	Thr	Glu	Ser	Thr 230	Thr	Glu	Thr	Lys	Glu 235	Pro	Lys	Lys	Ala	Lys 240
Arg	Ser	Ser	Lys	Glu 245	Glu	Ala	Glu	Met	Ala 250	Tyr	Lys	Asp	Phe	Leu 255	Leu

Gln Ser Ser Thr Val Ala Ala Glu Ala Gln Asp Gly Pro Gln Glu Ala

F Ü A . . ## ### Ti. m m Æ hes. f1.1 11. 10 5 C#1 L. <210> 326 <211> 241 <212> PRT <213> homo sapiens

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<213> homo sapiens

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Leu	Phe	Leu 35	Ala	Gly	Tyr	Glu	Leu 40	Thr	Pro	Thr	Met	Arg 45	Asp	Ile	Asn
Lys	Lys 50	Phe	Ser	Val	Arg	Tyr 55	Tyr	Leu	Asn	Leu	Val 60	Leu	Ile	Asp	Glu
Glu 65	Glu	Arg	Arg	Tyr	Phe 70	Lys	Gln	Gln	Glu	Val 75	Val	Leu	Trp	Arg	Lys 80
Gly	Asp	Ile	Val	Arg 85	Lys	Ser	Met	Ser	His 90	Gln	Ala	Ala	Ile	Ala 95	Ser
Gln	Arg	Phe	Glu 100	Gly	Thr	Thr	Ser	Leu 105	Gly	Glu	Val	Arg	Thr 110	Pro	Ser
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Gly 1	Glu		Trp	5 Phe				Pro	10 Gly		Leu		Lys	15	Leu
Gly 1 Ser	Glu Trp	Asp His	Trp 20 Val	5 Phe Lys	Phe Gln	Arg Tyr	Glu Leu	Pro 25 Glu	10 Gly Gln	Pro Pro	Leu	Val Pro	Lys 30 Trp	15 Gly	Leu Tyr
Gly 1 Ser	Glu Trp Gly Val 50	Asp His 35	Trp 20 Val Arg	5 Phe Lys Arg	Phe Gln Glu	Arg Tyr Gly 55	Glu Leu 40	Pro 25 Glu Arg	Gly Gln Leu	Pro Pro	Leu Arg Cys	Val Pro 45 Thr	Lys 30 Trp	15 Gly Gly	Leu Tyr
Gly 1 Ser Leu Gln	Glu Trp Gly Val 50	Asp His 35 Glu	Trp 20 Val Arg	5 Phe Lys Arg	Phe Gln Glu Ser	Arg Tyr Gly 55 Leu	Glu Leu 40 Arg	Pro 25 Glu Arg	Gly Gln Leu	Pro Pro Thr	Leu Arg Cys	Val Pro 45 Thr	Lys 30 Trp	15 Gly Gly Leu	Leu Tyr Pro Val
Gly 1 Ser Leu Gln Trp 65	Glu Trp Gly Val 50 Trp	Asp His 35 Glu Ala	Trp 20 Val Arg Gly	Phe Lys Arg Phe	Phe Gln Glu Ser 70	Arg Tyr Gly 55 Leu	Glu Leu 40 Arg Leu Ser	Pro 25 Glu Arg	Gly Gln Leu Ser	Pro Pro Thr 75 Pro	Leu Arg Cys 60 Leu Arg	Val Pro 45 Thr	Lys 30 Trp His	Gly Gly Leu Ser	Leu Tyr Pro Val 80
Gly 1 Ser Leu Gln Trp 65	Glu Trp Gly Val 50 Trp Asp	Asp His 35 Glu Ala Thr	Trp 20 Val Arg Gly Asp	Phe Lys Arg Phe Pro 85 Asp	Phe Gln Glu Ser 70 Arg	Arg Tyr Gly 55 Leu Ala Thr	Glu Leu 40 Arg Leu Ser	Pro 25 Glu Arg Gly Pro Asn 105	Gly Gln Leu Ser Cys 90	Pro Pro Thr 75 Pro Glu	Leu Arg Cys 60 Leu Arg	Val Pro 45 Thr Pro	Lys 30 Trp His Pro	Gly Gly Leu Ser Tyr 95 Lys	Leu Tyr Pro Val 80 Arg

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<212> PRT

<213> homo sapiens

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Asn	Ser	Gly	Ala	Val 165	Lys	Arg	Gln	Gly	Arg 170	Cys	Asp	Thr	Tyr	Ala 175	Thr
Glu	Phe	Asp	Leu 180	Glu	Ala	Glu	Glu	Tyr 185	Val	Pro	Leu	Pro	Lys 190	Gly	Asp
Val	His	Lys 195	Lys	Lys	Glu	Ile	Ile 200	Gln	Asp	Val	Thr	Leu 205	His	Asp	Leu
Asp	Val 210	Ala	Asn	Ala	Arg	Pro 215	Gln	Gly	Gly	Gln	Asp 220	Ile	Leu	Ser	Met
Met 225	Gly	Gln	Leu	Met	Lys 230	Pro	Lys	Lys	Thr	Glu 235	Ile	Thr	Asp	Lys	Leu 240
Arg	Gly	Glu	Ile	Asn 245	Lys	Val	Val	Asn	Lys 250	Tyr	Ile	Asp	Gln	Gly 255	Ile
Ala	Glu	Leu	Val 260	Pro	Gly	Val	Leu	Phe 265	Val	Asp	Glu	Val	His 270	Met	Leu
Asp	Ile	Glu 275	Cys	Phe	Thr	Tyr	Leu 280	His	Arg	Ala	Leu	Glu 285	Ser	Ser	Ile
Ala	Pro 290	Ile	Val	Ile	Phe	Ala 295	Ser	Asn	Arg	Gly	Asn 300	Cys	Val	Ile	Arg
Gly 305	Thr	Glu	Asp	Ile	Thr 310	Ser	Pro	His	Gly	Ile 315	Pro	Leu	Asp	Leu	Leu 320
Asp	Arg	Val	Met	Ile 325	Ile	Arg	Thr	Met	Leu 330	Tyr	Thr	Pro	Gln	Glu 335	Met
Lys	Gln	Ile	Ile 340	Lys	Ile	Arg	Ala	Gln 345	Thr	Glu	Gly	Ile	Asn 350	Ile	Ser
Glu	Glu	Ala 355	Leu	Asn	His	Leu	Gly 360	Glu	Ile	Gly	Thr	Lys 365	Thr	Thr	Leu
Arg	Tyr 370	Ser	Val	Gln	Leu	Leu 375	Thr	Pro	Ala	Asn	Leu 380	Leu	Ala	Lys	Ile
Asn 385	Gly	Lys	Asp	Ser	Ile 390	Glu	Lys	Glu	His	Val 395	Glu	Glu	Ile	Ser	Glu 400
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Leu	Phe	His 35	Phe	Leu	Trp	Ser	Ile 40	Gln	His	Gly	Pro	Asp 45	Tyr	His	His
Ser	Val 50	Gln	Lys	Val	Lys	Arg 55	Asp	Ala	Val	Arg	Gly 60	Cys	Asp	Val	Leu
Ser 65	Ala	Ser	Asp	Asp	Thr 70	Val	Ala	Ser	Val	Gly 75	Cys	Lys	Asp	Asp	Asp 80
Gly	Ser	Asp	Arg	Arg 85	Leu	Gln	Gly	Ala	Val 90	Gln	Val	Gly	Glu	Ala 95	Leu
Asn	Val	Gln	His 100	Val	Asp	Leu	Ile	Asn 105	Lys	Gln	His	Thr	Arg 110	Asp	Gln
Leu	Ser	Asn 115	Ala	Leu	Val	Asp	Val 120	Leu	Val	His	His	Leu 125	Ile	Asn	Leu
Pro	Ser 130	Lys	Phe	Val	Cys	Asp 135	Phe	Cys	Leu	Leu	Trp 140	Leu	His		
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Ser	His	Ile	Gln 20	Val	Met	Gln	Gly	His 25	Ile	Leu	Asp	Asp	Phe 30	Phe	Leu
Phe	Val	His 35	Ile	Pro	Phe	Trp	Gln 40	Gly	Asp	Ile	Leu	Phe 45	Ser	Phe	Lys
Val	Glu 50	Phe	Cys	Gly	Ile	Gly 55	Ile	Thr	Pro	Ala	Leu 60	Pro	Leu	His	Gly
Pro 65	Thr	Val	Gly	Phe	Asn 70	Val	Asn	His	Ile	Ser 75	Ser	Phe	Tyr	Ser	Leu 80
Phe	Leu	Gln	Thr	Phe 85	Lys	Asn	Ala	Gly	Val 90	Gln	Phe	Gln	Leu	Phe 95	Gly
Ser	Phe	Gly	Cys 100	Phe	Glu	Ser	Tyr	Asp 105	His	Met	Ala	Asn	Gly 110	Phe	Ala
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Asp	Asp	Ile	Asp	Leu	Asp	Ala	Leu	Ala	Ala	Glu	Ile	Glu	Gly	Ala	Gly

Ala	Ala	Lys 35	Glu	Gln	Glu	Pro	Gln 40	Lys	Ser	Lys	Gly	Lys 45	Lys	Lys	Lys	
Glu	Lys 50	Lys	Lys	Gln	Asp	Phe 55	Asp	Glu	Asp	Asp	Ile 60	Leu	Lys	Glu	Leu	
Glu 65	Glu	Leu	Ser	Leu	Glu 70	Ala	Gln	Gly	Ile	Lys 75	Ala	Asp	Arg	Glu	Thr 80	
Val	Ala	Val	Lys	Pro 85	Thr	Glu	Asn	Asn	Glu 90	Glu	Glu	Phe	Thr	Ser 95	Lys	
Asp	Lys	Lys	Lys 100	Lys	Gly	Gln	Lys	Gly 105	Lys	Lys	Gln	Ser	Phe 110	Asp	Asp	
Asn	Asp	Ser 115	Glu	Glu	Leu	Glu	Asp 120	Lys	Asp	Ser	Lys	Ser 125	Lys	Lys	Thr	
Ala	Lys 130	Pro	Lys	Val	Glu	Met 135	Tyr	Ser	Gly	Ser	Leu 140	Thr	Asn	Phe	Leu	
Lys 145	Lys	Leu	Lys	Gly	Lys 150	Leu	Lys	Asn	Gln	Ile 155	Arg	Ser	Gly	Met	Gly 160	
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Trp	Glu	Phe	Asn 20	Lys	Leu	Pro	Lys	Lys 25	Ala	Lys	Gly	Lys	Ala 30	Gln	Lys
Ser	Asn	Lys 35	Lys	Trp	Asp	Gly	Ser 40	Glu	Glu	Asp	Glu	Asp 45	Asn	Ser	Lys
Lys	Ile 50	Lys	Glu	Arg	Ser	Arg 55	Ile	Asn	Ser	Ser	Gly 60	Glu	Ser	Gly	Asp
Glu 65	Ser	Asp	Glu	Phe	Leu 70	Gln	Ser	Arg	Lys	Gly 75	Gln	Lys	Lys	Asn	Gln 80
Lys	Asn	Lys	Pro	Gly 85	Pro	Asn	Ile	Glu	Ser 90	Gly	Asn	Glu	Asp	Asp 95	Asp
Ala	Ser	Phe	Lys 100	Ile	Lys	Thr	Val	Ala 105	Gln	Lys	Lys	Ala	Glu 110	Lys	Lys
Glu	Arg	Glu 115	Arg	Lys	Lys	Arg	Asp 120	Glu	Glu	Lys	Ala	Lys 125	Leu	Arg	Lys
Leu	Lys 130	Glu	Lys	Glu	Glu	Leu 135	Glu	Thr	Gly	Lys	Lys 140	Asp	Gln	Ser	Lys

Gln 145	Lys	Glu	Ser	Gln	Arg 150	Lys	Phe	Glu	Glu	Glu 155	Thr	Val	Lys	Ser	Lys 160
Val	Thr	Val	Asp	Thr 165	Gly	Val	Ile	Pro	Ala 170	Ser	Glu	Glu	Lys	Ala 175	Glu
Thr	Pro	Thr	Ala	Ala	Glu	Asp	Asp	Asn	Glu	Gly	Asp	Lys	Lys	Asn	Glu
Arg			180					185					190		
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Pro	Pro	Leu	Ser 20	Ser	Phe	Leu	Phe	Leu 25	Leu	Ile	Phe	Arg	Ser 30	Phe	Cys
Leu	Leu	His 35	Cys	His	Leu	Leu	Gln 40	Leu	Trp	Glu	Ser	Leu 45	Leu	Ser	Leu
Gln	Arg 50	Gln	Glu	Leu	Leu	Gln 55	Tyr	Gln	Gln	Ser	Leu 60	Trp	Ile	Leu	Gln
Phe 65	Leu	Leu	Gln	Ile	Ser 70	Phe	Glu	Ile	Pro	Phe 75	Val	Tyr	Ser	Asp	Pro 80
Phe	Tyr	Leu	Phe	Leu 85	Thr	Leu	Leu	Phe	Leu 90	Ser	Ala	Ser	Ala	Val 95	Ser
Leu	Phe	Leu	His 100	Leu	Ala	Phe	Phe	Ser 105	Arg	Ala	Pro	Ser	Phe 110	Leu	Pro
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Thr	Gly	Pro	Gly 20	Gly	Glu	Asp	Gly	Ala 25	Gly	Gly	Arg	Val	Pro 30	Gly	Thr
Arg	Pro	Gln 35	Arg	Pro	Pro	Ala	Leu 40	Gln	Arg	Ala	Glu	Asp 45	Gly	Arg	Gln
Gly	Gly 50	Leu	Arg	Val	Ala	Gly 55	Thr	Ala	Gly	Pro	Pro 60	Pro	Gly	Val	Pro
Leu 65	Arg	Pro	Gly	Gln	Gly 70	Gly	Ser	Gly	His	Gln 75	Glu	Gln	Gly	Ala	Ser 80

His	Pro	Gly	Ser	Leu 85	Asp	Gln	Gly	Leu	Thr 90	Gly	Ala	Lys	Arg	Pro 95	Gln
Gly	Cys	Pro	Ala 100	Cys	Gly	Arg	Arg	Pro 105	Pro	Cys	Val	Gly	Gly 110	Val	Pro
Gly	Ser	Ala 115	His	Arg	Pro	Gln	Pro 120	Glu	Gly	Ala	Ala	Leu 125	Arg	Arg	Gly
Arg	Ser 130	Arg	Leu	Gln	Gln	Ala 135	Gly	Pro	Cys	Суз	Cys 140	Arg	Val	Leu	Trp
Leu 145	Arg	Arg	Cys	His	Pro 150	Ala	Gly	Leu	Pro	Arg 155	Arg	Pro	Pro	Ala	Ala 160
Asp	Pro	Gly	Ala	Arg 165	Ala	Ala	Ala	Gly	Gly 170	Arg	His	Val	Leu	Cys 175	Arg
Ser	Pro	Leu	His 180	Pro	Gly	Leu	Arg	Pro 185	Pro	Leu	Pro	Gln	Trp 190	Gly	Leu
Leu	Arg	Pro 195	Glu	Gly	Gly	Cys	Leu 200	Cys	Val	Pro	Val	Ser 205	Arg	Gly	Ile
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Arg 225	Gly	Tyr	Leu	Gly	Leu 230										
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Gln															
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Leu	Asp Glu	Gly	Ser Arg 20	5	Pro Leu		Leu Thr	Ala Phe 25	10	Phe Arg	Asn Asp	•	Phe Gly 30	15	His Lys
	-	-	Arg	5 Gly		His		Phe 25	10 Ala	Arg		Leu	Gly 30	15	Lys
Leu	Glu	Leu Leu	Arg 20 Glu	5 Gly	Leu Val	His	Thr Leu 40	Phe 25 Ala	10 Ala	Arg Gly	Asp Pro	Leu	Gly 30	15 Glu	Lys
Leu Met	Glu Ala Tyr	Leu Leu 35	Arg 20 Glu Gly	5 Gly Val	Leu Val	His Phe Thr	Thr Leu 40 Asp	Phe 25 Ala	10 Ala Arg Lys	Arg Gly	Asp Pro Asp	Leu Ser 45 Phe	Gly 30	15 Glu Leu Ser	Lys Leu
Leu Met Leu Ala	Glu Ala Tyr 50	Leu Leu 35 Asn	Arg 20 Glu Gly	5 Gly Val Gln	Leu Val Lys	His Phe Thr 55	Thr Leu 40 Asp	Phe 25 Ala Gly	10 Ala Arg Lys	Arg Gly Gly Tyr	Asp Asp 60 Asp	Leu Ser 45 Phe	Gly 30 Gly Val	15 Glu Leu Ser	Lys Leu Leu Gly
Leu Met Leu Ala 65	Glu Ala Tyr 50 Leu	Leu Leu 35 Asn	Arg 20 Glu Gly Asp	Gly Val Gln Arg	Leu Val Lys Arg 70 Ser	His Phe Thr 55	Thr Leu 40 Asp Glu Glu	Phe 25 Ala Gly Phe	10 Ala Arg Lys Arg Val 90	Arg Gly Gly Tyr 75	Asp Asp 60 Asp	Leu Ser 45 Phe Leu Gly	Gly 30 Gly Val	15 Glu Leu Ser Lys	Lys Leu Leu Gly 80
Leu Met Leu Ala 65 Ala	Glu Ala Tyr 50 Leu	Leu Leu 35 Asn Arg	Arg 20 Glu Gly Asp Ile	Gly Val Gln Arg Arg 85	Leu Val Lys Arg 70 Ser	His Phe Thr 55 Leu Arg	Thr Leu 40 Asp Glu Glu	Phe 25 Ala Gly Phe Pro	10 Ala Arg Lys Arg Val 90	Arg Gly Gly Tyr 75	Asp 60 Asp Leu	Leu Ser 45 Phe Leu Gly	Gly 30 Gly Val Gly Ala	15 Glu Leu Ser Lys Trp 95	Lys Leu Leu Gly 80

Asn Leu Lys Glu Pro Leu Tyr Val Gly Gly Ala Pro Asp Phe Ser Lys

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Leu 145	Ala	Arg	Ala	Ala	Ala 150	Val	Ser	Ser	Gly	Phe 155	Asp	Gly	Ala	Ile	Gln 160
Leu	Val	Ser	Leu	Gly 165	Gly	Arg	Gln	Leu	Leu 170	Thr	Pro	Glu	His	Val 175	Leu
Arg	Gln	Val	Asp 180	Val	Thr	Ser	Phe	Ala 185	Gly	His	Pro	Cys	Thr 190	Arg	Ala
Ser	Gly	His 195	Pro	Cys	Leu	Asn	Gly 200	Ala	Ser	Cys	Val	Pro 205	Arg	Glu	Ala
Ala	Tyr 210	Val	Cys	Leu	Cys	Pro 215	Gly	Gly	Phe	Ser	Gly 220	Pro	His	Cys	Glu
Lys 225	Gly	Leu	Val	Glu	Lys 230	Ser	Ala	Gly	Asp	Val 235	Asp	Thr	Leu	Ala	Phe 240
Asp	Gly	Arg	Thr	Phe 245	Val	Glu	Tyr	Leu	Asn 250	Ala	Val	Thr	Glu	Ser 255	Glu
Lys	Ala	Leu	Gln 260	Ser	Asn	His	Phe	Glu 265	Leu	Ser	Leu	Arg	Thr 270	Glu	Ala
Thr	Gln	Gly 275	Leu	Val	Leu	Trp	Ser 280	Gly	Lys	Ala	Thr	Glu 285	Arg	Ala	Asp
Tyr	Val 290	Ala	Leu	Ala	Ile	Val 295	Asp	Gly	His	Leu	Gln 300	Leu	Ser	Tyr	Asn
Leu 305	Gly	Ser	Gln	Pro	Val 310	Val	Leu	Arg	Ser	Thr 315	Val	Pro	Val	Asn	Thr 320
Asn	Arg	Trp	Leu	Arg 325	Val	Val	Ala	His	Arg 330	Glu	Gln	Arg	Glu	Gly 335	Ser
Leu	Gln	Val	Gly 340	Asn	Glu	Ala	Pro	Val 345	Thr	Gly	Ser	Ser	Pro 350	Leu	Gly
Ala	Thr	Gln 355	Leu	Asp	Thr	Asp	Gly 360	Ala	Leu	Trp	Leu	Gly 365	Gly	Leu	Pro
Glu	Leu 370	Pro	Val	Gly	Pro	Ala 375	Leu	Pro	Lys	Ala	Tyr 380	Gly	Thr	Gly	Phe
Val 385	Gly	Cys	Leu	Arg	Asp 390	Val	Val	Val	Gly	Arg 395	His	Pro	Leu	His	Leu 400
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Gly	Glu	Leu 35	Phe	Leu	Val	His	Pro 40	Ser	Leu	Gln	Leu	Tyr 45	Leu	Cys	Pro

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Leu	Ser	Leu 35	Leu	Ser	Thr	Ser	Thr 40	Ala	Ser	Asp	Ser	Ser 45	Val	Ile	Ser
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Glu	Gly	Phe 115	Ala	Gln	Leu	Val	Pro 120	Arg	Arg	Leu	Gln	Phe 125	Leu	Ala	Pro
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Pro 225	Ser	Pro	Ser	Ser	Ser 230	Pro	Ser	Phe	Ser	Gly 235	Ser	Ala	Ser	Asp	Ser 240
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Gly	Ser	Ala	Gln	Gly 165	His	Arg	Asp	Gly	Gly 170	Gly	Gly	Arg	Ser	Gly 175	Gly
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Trp	Arg	Ser 195	Pro	Arg	Ser	Arg	Thr 200	Pro	Cys	Trp	Trp	Thr 205	Arg	Ala	Thr
Ala	Thr 210	Glu	Arg	Pro	Pro	Leu 215	Pro	Pro	Thr	Pro	Phe 220	Leu	Ala	Pro	Ser
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Val	Ser	Lys	Leu 100	Leu	Glu	Lys	Val	Arg 105	Lys	Val	Ser	Val	Asn 110	Val	Lys
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Pro 225	Ser	Pro	Arg	Arg	Arg 230	Trp	Arg	Arg	Pro	Arg 235	Сув	Val	Pro	Ala	Arg 240
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	Leu	Cys	Val 35	Lys	Ser	Leu	Phe	Lys 40	Ala	Arg	Met	Phe	Pro 45	Leu	Gly	Tyr
	Leu	Leu 50	Lys	Leu	Asn	Leu	Phe 55	Cys	Phe	Pro	Pro	Leu 60	Arg	Ser	Ala	Ala
THE PERSON NAMED IN	His 65	Phe	Thr	Ala	Ala	Ser 70	Phe	Leu	Ser	Met	Ala 75	Leu	Pro	Ser		
H. H. ramely after after H. H., ramely Moore, House, II Rames, Ramell Ramell aft.	<210><211><211><212><213>	65 PRT	sapie	ens										·		
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Glu	Met	Leu 275	Leu	Asn	Val	Glu	Tyr 280	Met	Met	Glu	Leu	Met 285	Asp	Pro	Ala
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Lys	Ala	Leu 35	Val	Pro	Phe	Leu	Leu 40	Asp	Glu	Asp	Tyr	Glu 45	Lys	Val	Leu
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Pro 145	Pro	Val	Gly	Pro	Lys 150	Pro	Glu	Pro	Lys	Val 155	Phe	Asn	Gly	Gly	Leu 160
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Gln	Ala	Gly	Leu 180	Gly	Arg	His	Gly	Arg 185	Gln	Ser	Tyr	Arg	Arg 190	Ser	Trp
Glu	Lys	Arg 195	Arg	Gly	Thr	Gly	Ser 200	Met	Val	Ser	Asp	Thr 205	Pro	Gly	Thr
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Val	Pro	Thr	Asp	Leu 165	Thr	Leu	Leu	Pro	Gly 170	His	Leu	Tyr	Met	Met 175	Ser
Glu	Val	Leu	Ala 180	Lys	Glu	Glu	Ala	Arg 185	Arg	Ala	Leu	Glu	Thr 190	Pro	Ser
Cys	Phe	Leu 195	Lys	Val	Ser	Arg	Leu 200	Glu	Ala	Gln	Leu	Leu 205	Leu	Glu	Arg
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Val	Ser	Pro	Val	His 85	Gly	Ala	Pro	Pro	Leu 90	Trp	Pro	Arg	Leu	Gln 95	Thr
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Tyr	Met	Ala	Ala	Val 85	Asn	Ser	Thr	Gly	Asn 90	Cys	Tyr	Val	Trp	Asn 95	Leu
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Ser	Thr 130	Leu	Leu	Ala	Thr	Cys 135	Ser	Ala	Asp	Gln	Thr 140	Суѕ	Lys	Ile	Trp
Arg 145	Thr	Ser	Asn	Phe	Ser 150	Leu	Met	Thr	Glu	Leu 155	Ser	Ile	Lys	Ser	Gly 160
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Gly	Ser	Ala	Leu	Thr 165	Trp	Val	Leu	His	Gly 170	Ser	Leu	Gln	Leu	Pro 175	Pro
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Pro	Trp 50	Phe	Gln	Leu	Leu	Ser 55	Phe	Gln	Tyr	Ile	Leu 60	Glu	Thr	Thr	Pro
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Arg	Lys	Pro	Lys	Met 85	Ala	Pro	Cys	His	Leu 90	Glu	Ala	Asp	Gln	Val 95	Ile
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                                                               Gly
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Val	Ser	Arg	Ala 100	Met	Ala	Gĺn	Ala	Thr 105	Ala	Pro	Arg	Ala	Ala 110	Pro	Gln
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Tyr Ser Thr His Arg His Gln

Asn Leu Asp Ile Ser Gly Gly Cys

41.1 ١,١ [1] G) ŧį 4 = = 11, 11. 12:2 [#] <210> 383 <211> 86 <212> PRT

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55

Leu 65	Leu	Ala	Arg	Leu	Gln 70	Gly	Pro	Leu	Trp	Ser 75	His	Thr	Glu	Ala	Val 80
Thr	Gly	His	Lys	Pro 85	Arg	Arg	Ala	Arg	Gly 90	Ser	Сув	Ala	Glu	Ala 95	Pro
Gly	Pro	Leu	Ser 100	Gly	Ser	Phe	Pro	Ser 105							
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Arg	Lys	Leu	Pro 20	Lys	Leu	Gly	Met	Glu 25	Gln	His	Cys	Asn	Glu 30	Met	Cys
Pro	Pro	Ser 35	Ser	Leu	Phe	Leu	Pro 40	Gly	Ala	Tyr	Lys	Ala 45	Gln	Met	Tyr
Ser	Asp 50	Val	Trp	Thr	Asn	Thr 55	Lys	Lys	Lys	Lys	Lys 60	Lys	Lys	Lys	Lys
Lys 65	Ala	Phe	Leu	Ser	His 70	Arg	His	Lys	Thr	Gln 75	Ile	Ile	Tyr	Cys	Tyr 80
Glu	Ala	Leu	Phe	Thr 85	Asn	Gly	Gln	Phe	Leu 90	His	Phe	Ile	Ala	Ala 95	Cys
Glu	Arg	Leu	Pro 100	Asp	Gly	Arg	Pro	Ile 105	Ser.	Leu	Val	Leu	Gln 110	Thr	Ser
Ser	Gln	Ala 115	Ala	Phe	Tyr	Gln	Lys 120	Gly	Glu	Asn	Ser	Cys 125	Leu	Ser	Phe
Leu	Lys 130	Asn	Ala	Phe	Leu	Tyr 135	Leu	Ser	Ile	Arg	His 140	Tyr	Thr	Ser	Glu
Leu 145	Tyr	Lys	Arg	Pro	Gly 150	Gly	Thr	Met	Ser	Leu 155	Val	Asp	Thr	Phe	His 160
Cys	Ser	Val	Ala	Pro 165	Phe	Leu	Ala	Trp	Glu 170	Ala	Ser	Ala			
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Ser	Leu	Arg	Ile 20	Ile	Cys	Leu	Ala	Ile 25	Thr	Gly	Ser	Trp	Lys 30	Cys	Phe

Leu Gly Cys Val Lys Ile Asn Gln Gly Gly Met Lys His Ile Phe Leu

40 45 35 Thr Lys Leu Glu Phe Leu Arg Glu Gln Met Gln Arg Asp Leu Leu Ala 55 50 60 Gly Gln Pro Leu Trp Ser His Thr Glu Ala Val Leu Leu Ala Arg Leu 70 75 65 80 Arg Gly Thr Gly His Lys Pro Arg Arg Ala Ser Cys Ala Glu Ala Pro 85 90 95 Gly Phe Pro Leu Ser Ser Pro Ser

105

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100

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Pro 225	Glu	Thr	Leu	Pro	Glu 230	Ser	Ser	Leu	Ile	Phe 235	Cys	Gly	Arg	Asp	Thr 240	
Arg	Asn	Gly	Arg	Lys 245	Ile	Gly	Lys	Phe	Cys 250	Lys	Cys	Ala	Asn	Leu 255	Val	
Gly	Glu	Arg	Gly 260	Thr	Gly						,					
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Pro	Ile	Phe	Leu 20	Pro	Phe	Leu	Val	Ser 25	Leu	Pro	Gln	Lys	Ile 30	Lys	Glu	
Leu	Ser	Gly 35	Lys	Val	Ser	Gly	Lys 40	His	Lys	Arg	Gln	Ser 45	Phe	Pro	Glu	
Cys	Gly 50	Lys	Lys	Asp	Leu	Ile 55	Val	Leu	Ser	Leu	Glu 60	Val	Lys	Leu	Cys	
Cys 65	Phe															
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Tyr	Phe	Pro	Ser 20	Leu	Gln	Gln	Ser	Pro 25	Ala	Pro	Pro	Tyr	Ala 30	Tyr	Pro	
Gly	Glu	Pro 35	Asp	Thr	Glu	Pro	Asp 40	Leu	Pro	Gly	His	Pro 45	Phe	Ser	Trp	
Gln	Asn 50	Trp	Leu	Met	Thr	Ile 55	Phe	Gln	Arg	Tyr	Trp 60	Asn	Thr	Pro	Ala	
Val 65	Leu	Ser	Asp	Thr	Leu 70	Val	Val	Cys	Arg	Pro 75	Gly	Leu	Leu			
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Thr	Ala	Ala	Leu 20	Lys	Glu	Lys	Thr	Pro 25	Asp	Phe	Arg	Arg	Leu 30	Ser	Pro
Arg	Val	Ser 35	Glu	Thr	Ala	Asp	Ser 40	Arg	Lys	Val	Ala	Arg 45	Gly	Pro	Arg
Phe	Val 50	Met	Arg	Asp	Asn	Pro 55	Gly	Arg	Gly	Gly	Asp 60	His	Arg	Gly	Leu
Gln 65	Ala	Pro	Gly	Trp	Met 70	Lys	Glu	Gly	Arg	Gly 75	Trp	Gly	Val	Leu	
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Thr	Ala	Pro	Phe 20	Thr	Lys	Pro	Pro	Ile 25	Pro	Asp	Pro	Pro	Ser 30	Ser	Thr
Pro	Ala	Pro 35	Gly	Asp	Pro	Tyr	Asp 40	His	Pro	Arg	Ala	Arg 45	Gly	Cys	Pro
Ala	Leu 50	Gln	Ile	Gly	Ala	His 55	Gly	Arg	Pro	Tyr	Gly 60	Ser	Pro	Arg	Ser
Pro 65	Arg	Arg	Glu	Glu	Arg 70	Asp	Val								,
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Pro 1	Pro	Pro	Pro	Pro 5	Pro	Lys	Phe	His	Pro 10	Ser	Phe	Arg	Leu	Leu 15	Gln
Pro	Pro	Leu	Gln 20	Asn	Pro	Pro	Ser	Pro 25	Thr	Leu	Leu	His	Pro 30	Pro	Arg
Arg	Leu	Glu 35	Thr	Pro	Met	Ile	Thr 40	Pro	Ala	Pro	Gly	Val 45	Val	Pro	His
Tyr	Lys 50	Ser	Gly	Pro	Thr	Gly 55	Asp	Leu	Thr	Gly	Val 60	Arg	Gly	Leu	Arg
Asp	Ala	Arg	Arg	Glu	Thr	Ser	Glu	Val	Trp	Arg	Leu	Phe	Leu	Gln	_
65	1,14		_		70					75					80
65 Cys		Val	Asp	Суs 85		Val	Gly	Gly	Leu 90	75 Lys	Ile	Asn	Ser	Leu 95	80 Glu

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185

190

Gln	Glu	Asp 195	Ala	Asn	Gly	Asn	Cys 200	Gln	Lys	Cys	Ala	Phe 205	Gly	Tyr	Ser
Gly	Leu 210	Asp	Суз	Lys	Asp	Lys 215	Phe	Gln	Leu	Ile	Leu 220	Thr	Ile	Val	Gly
Thr 225	Ile	Ala	Gly	Ile	Val 230	Ile	Leu	Ser	Met	Ile 235	Ile	Ala	Leu	Ile	Val 240
Thr	Ala	Arg	Ser	Asn 245	Asn	Lys	Thr	Lys	His 250	Ile	Glu	Glu	Glu	Asn 255	Leu
Ile	Asp	Glu	Asp 260	Phe	Gln	Asn	Leu	Lys 265	Leu	Arg	Ser	Thr	Gly 270	Phe	Thr
Asn	Leu	Gly 275	Ala	Glu	Gly	Ser	Val 280	Phe	Pro	Lys	Val	Arg 285	Ile	Thr	Ala
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Pro 305	Arg	Pro	Asp	Tyr							-				
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Ala	Ser	Glu	Leu 20	Asp	Ser	Leu	Gln	Thr 25	Phe	Thr	Thr	Ser	Ile 30	Gln	Arg
Gly	Trp	Gln 35	Met	Ser	Asp	Gly	Arg 40	Lys	Thr	Pro	Glu	Ala 45	Arg	Ser	Leu
Leu	Val 50	Leu	Thr	Ser	Pro	Ser 55	Val	Phe	Leu	Asn	Thr 60	Leu	Asn	Asn	Ser
Leu 65	Tyr	Ile	Gly	Trp	Gly 70	Pro	Trp	Arg	Val	Pro 75	His	Ser	Tyr	Asp	Ser 80
Asn	Ser	Gln	Gly	Gly 85	Ala	Cys	Cys	Cys	Val 90	Leu	Asn	Arg	Asp	Phe 95	Ala
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7	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_

Ile Tyr Pro Leu Cys Asp Lys Lys Lys Lys Lys Lys Lys Ser Arg

			20					25					30		
Thr	Ser	Thr 35	Phe	Asp	Phe	Ser	Gln 40	Pro	Gln	Pro	Arg	Lys 45	Asn	Gly	Ser
Trp	Asp 50	Lys	Gln	Leu	Val	Phe 55	Val	Ser	Lys	Thr	Gln 60	Ile	Gly	His	Ile
Asn 65	Ala	Thr	Ala	Phe	Arg 70	Ser	Phe	Asp	Phe	Asp 75					
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Asn	Thr	Phe	Lys 20	Asn	Asn	Val	Leu	Ser 25	Gln	Ala	Trp	Trp	Cys 30	Val	His
Leu	Val	Pro 35	Thr	Ile	Trp	Glu	Ala 40	Glu	Ala	Gly	Gly	Ser 45	Leu	Glu	Pro
Arg	Ser 50	Leu	Lys	Leu	Gln	Сув 55	Pro	Val	Val	Ala	Pro 60	Val	Asn	Asn	Cys
Thr 65	Pro	Ala	Trp	Ala	Thr 70										
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Ser	Phe	Leu	Glu 20	Met	Arg	Ser	Arg	Tyr 25	Val	Ala	Gln	Ala	Gly 30	Val	Gln
Leu	Phe	Thr 35	Gly	Ala	Thr	Thr	Gly 40	His	Cys	Ser	Phe	Lys 45	Leu	Leu	Gly
Ser	Ser 50	Asp	Pro	Pro	Ala	Ser 55	Ala	Ser	Gln	Ile	Val 60	Gly	Thr	Arg	Cys
Thr 65	His	His	His	Ala											
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Thr	Glu	Ser 35	Glu	Lys	Glu	Ile	Tyr 40	Asn	Gln	Val	Asn	Val 45	Val	Leu	Lys
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His 65	Glu	Ile	Arg	Glu	Ala 70	Ile	Gln	His	Pro	Ala 75	Asp	Glu	Lys	Leu	Gln 80
Glu	Lys	Ala	Trp	Gly 85	Ala	Val	Val	Pro	Leu 90	Val	Gly	Lys	Leu	Lys 95	Lys
Phe	Tyr	Glu	Phe 100	Ser	Gln	Arg	Leu	Glu 105	Ala	Ala	Leu	Arg	Gly 110	Leu	Leu
Gly	Ala	Leu 115	Thr	Ser	Thr	Pro	Tyr 120	Ser	Pro	Thr	Gln	His 125	Leu	Glu	Arg
Glu	Gln 130	Ala	Leu	Ala	Lys	Gln 135	Phe	Ala	Glu	Ile	Leu 140	His	Phe	Thr	Leu
Arg 145	Phe	Asp	Glu	Leu	Lys 150	Met	Thr	Asn	Pro	Ala 155	Ile	Gln	Asn	Asp	Phe 160
Ser	Tyr	Tyr	Arg ·	Arg 165	Thr	Leu	Ser	Arg	Met 170	Arg	Ile	Asn	Asn	Val 175	Pro
Ala	Glu	Gly	Glu 180	Asn	Glu	Val	Asn	Asn 185	Glu	Leu	Ala	Asn	Arg 190	Met	Ser
Leu	Phe	Tyr 195	Ala	Glu	Ala	Thr	Pro 200	Met	Leu	Lys	Thr	Leu 205	Ser	Asp	Ala
Thr	Thr 210	Lys	Phe	Val	Ser	Glu 215	Asn	Lys	Asn	Leu	Pro 220	Ile	Glu	Asn	Thr
Thr 225	Asp	Cys	Leu	Ser	Thr 230	Met	Ala	Ser	Val	Cys 235	Arg	Val	Met	Leu	Glu 240
Thr	Pro	Glu	Tyr	Arg 245	Ser	Arg	Phe	Thr	Asn 250	Glu	Glu	Thr	Val	Ser 255	Phe
Cys	Leu	Arg	Val 260	Met	Val	Gly	Val	Ile 265	Ile	Leu	Tyr	Asp	His 270	Val	His
Pro	Val	Gly 275	Ala	Phe	Ala	Lys	Thr 280	Ser	Lys	Ile	Asp	Met 285	Lys	Gly	Cys
Ile	Lys 290	Val	Leu	Lys	Asp	Gln 295	Pro	Pro	Asn	Ser	Val 300	Glu	Gly	Leu	Leu
Asn 305	Ala	Leu	Arg	Tyr	Thr 310	Thr	Lys	His	Leu	Asn 315	Asp	Glu	Thr	Thr	Ser 320

Ser Gln Thr

Leu 100

Lys Gln Ile Lys Ser Met Leu Gln 325 <210> 406 <211> 115 <212> PRT <213> homo sapiens <400> 406 Ile Asn Phe Leu Tyr Tyr Ile His Leu Ile Leu Arg Leu Cys Arg Leu 5 10 15 Gly Ile Phe Lys Ile Lys Glu Lys Ile Trp Pro Leu Leu Lys Val Cys 20 25 30 Gln Ile Pro His Val Val Pro Ser Ala Ala Cys Asn Phe Lys Lys Lys Gly Val Ser Ala Ser Ala Asp Ser Val Leu Leu Leu Ser Arg Ala Ser 50 55 60 Gly Gly Ser Arg Arq Arq Ser Gln Ser Arg Cys Ala Leu Leu Asp Arg 80 65 75 Gly Gly Gly Gly Ala Pro Gly Pro Glu Ser Ser Ser Ala Ala Leu Arq 85 90 95 Thr Ala Ser Arg Thr Gly Ser Pro Ser Pro Ala Pro Val Glu Pro 100 105 110 Pro Gln Ala 115 <210> 407 <211> 100 <212> PRT <213> homo sapiens <400> 407 Glu Pro Ala Leu Ala Leu Asp Ala Gly Trp Glu Asn Met Gly Tyr 5 10 15 Glu Asp Leu Met Leu Leu Leu Thr Leu Arg Leu Pro Leu 20 Ile Cys Val Glu Gln Leu His Lys Ile Arg Lys Ile Ser Leu Leu Leu 35 45 40 Ala Thr Met Ser His Leu Asp Ala Gly Leu Pro Pro Pro Ser Leu Leu 50 55 60 Thr Leu Val Phe Arg Gly Gln Leu Leu Cys Met Ala Ser Pro Pro Arg 65 70 75 80 Phe Leu His Leu Leu Ile Leu His Ser Pro Asp Tyr Lys Pro 95 85 90

Ser Arg Gly His

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Val

Glu

65

Asp

Ala

Glu Ile Val

Thr

Glu

Gly

Glu

Thr

100

Val

Glu

85

Leu

Ala

Glu

Arg

70

Ala

Leu

Gln Val

Arg

Arg

Thr

Ala

Leu

105

Pro

Glu

Ala

90

Ala

Leu

Ala Lys

75

Val

Thr

Glu

Lys

Glu

<210> 410 <211> 142 <212> PRT <213> homo sapiens <400> 410 Asp Thr ${\tt Pro}$ Lys Arg Pro Ala Val Ala Leu Trp Gln Arg Met Pro Gln 5 10 15 1 GlnVal Gly Gly Glu Ala Val Lys Ser Leu Gly Ala Pro Leu Ser Leu 20 25 30 Glu Thr Leu Cys Val Glu Arg Gln Gly Arg His Glu Gly Arg Cys Glu 35 40 45 Gly Ile Glu Ser Trp Ser Thr Val His Pro Ser Gln Pro Pro Pro Ser 50 55 60 Leu Ala Ala Pro Glu His Ser Leu Trp Pro Thr Ala Thr Glu Met Ser 65 70 75 80 Ala Cys Gln Asp Thr Trp Arg Arg Lys Lys Thr Arg His Gln Lys Lys 85 90 95 Gly Leu Pro Pro Gln Glu Gln Ile Glu Leu Leu Asp Gln His Thr Arg 100 105 Gly His Pro Ala Pro Cys Ala Gln Gly Glu Thr Gln Phe Ser Arg Lys 115 120 125 Val Ser Glu Thr Ala Thr Leu Pro Asn Trp Leu Cys Arg Leu 130 135 140 <210> 411 <211> 244 <212> PRT <213> homo sapiens <400> 411 Leu Val Gly Val Arg Gln Phe Arg Trp Cys Thr Arg Arq 10 Ala Ser Pro Gly Ala Ala Arg Ser Ala Pro Ile Ala Pro Ala Thr Gly 20 25 30 Gly Asp Ser Ala Gly Gln Asp Arg Arg Pro Asn Met Asn Leu 35 40 Asn Ser Pro Gly Leu Leu Ser Ser Met Thr Asp Val Pro Asn Lys Asp 50 55 60

Gly

Val

Arg

110

Leu

Glu

His

95

Thr

Glu

Cys

80

Gly	Glu	Leu 115	Lys	Arg	Arg	Leu	Gly 120	Leu	Ser	Thr	Leu	Gly 125	Glu	Leu	Lys
Gln	Asn 130	Leu	Ser	Arg	Ser	Trp 135	His	Asp	Val	Gln	Val 140	Ser	Ser	Ala	Tyr
Val 145	Lys	Thr	Ser	Glu	Lys 150	Leu	Gly	Glu	Trp	Asn 155	Glu	Lys	Val	Thr	Gln 160
Ser	Asp	Leu	Tyr	Lys 165	Lys	Thr	Gln	Glu	Thr 170	Leu	Ser	Gln	Ala	Gly 175	Gln
Lys	Thr	Ser	Ala 180	Ala	Leu	Ser	Thr	Val 185	Gly	Ser	Ala	Ile	Ser 190	Arg	Lys
Leu	Gly	Asp 195	Met	Arg	Asn	Ser	Ala 200	Thr	Phe	Lys	Ser	Phe 205	Glu	Asp	Arg
Val	Gly 210	Thr	Ile	Lys	Ser	Lys 215	Val	Val	Gly	Asp	Arg 220	Glu	Asn	Gly	Ser
Asp 225	Asn	Leu	Pro	Ser	Ser 230	Ala	Gly	Ser	Gly	Asp 235	Lys	Pro	Leu	Ser	Asp 240
Pro	Ala	Pro	Phe												
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Leu	Gly						Leu Val	Ser Met 25	10		Leu Pro				His Leu
Leu 1	Gly		Arg	5 Asp		His		Met	10 Pro				Gln	15	Leu
Leu 1 Ile	Gly Gly Gln	Ala Leu	Arg 20 Pro	5 Asp Gln	Leu	His Gly	Val Glu 40	Met 25 Ala	10 Pro Gln	Ala Pro	Pro Pro	Gly Leu 45	Gln 30 Glu	15 Val Leu	Leu Ser
Leu 1 Ile Phe	Gly Gly Gln Val	Ala Leu 35 Pro	Arg 20 Pro Leu	5 Asp Gln	Leu Gly Gly	His Gly Cys 55	Val Glu 40	Met 25 Ala Asp	10 Pro Gln Leu	Ala Pro	Pro Pro Gln 60	Gly Leu 45	Gln 30 Glu Asp	15 Val Leu	Leu Ser
Leu 1 Ile Phe Thr	Gly Gly Gln Val	Ala Leu 35 Pro	Arg 20 Pro Leu	5 Asp Gln Leu	Leu Gly Gly Lys 70	His Gly Cys 55 Leu	Val Glu 40 Gln	Met 25 Ala Asp	10 Pro Gln Leu Glu	Ala Pro Ala Leu 75	Pro Pro Gln 60	Gly Leu 45 Ser	Gln 30 Glu Asp	15 Val Leu Asn	Leu Ser Phe Leu
Leu 1 Ile Phe Thr Leu 65 Cys	Gly Gln Val 50 Phe	Ala Leu 35 Pro His	Arg 20 Pro Leu Leu	5 Asp Gln Leu Gly Asn	Leu Gly Gly Lys 70 Ser	His Gly Cys 55 Leu	Val Glu 40 Gln Ser	Met 25 Ala Asp Pro	10 Pro Gln Leu Glu Gly 90	Ala Pro Ala Leu 75 Ser	Pro Pro Gln 60 Leu	Gly Leu 45 Ser Leu Thr	Gln 30 Glu Asp	Val Leu Asn Ser	Leu Ser Phe Leu 80 Asp
Leu 1 Ile Phe Thr Leu 65 Cys	Gly Gln Val 50 Phe Gln	Ala Leu 35 Pro His	Arg 20 Pro Leu Leu Arg 100	5 Asp Gln Leu Gly Asn 85	Leu Gly Gly Lys 70 Ser	His Gly Cys 55 Leu Arg	Val Glu 40 Gln Ser Ser	Met 25 Ala Asp Pro Pro Gln 105	10 Pro Gln Leu Glu Gly 90 Gln	Ala Pro Ala Leu 75 Ser	Pro Pro Gln 60 Leu His	Gly Leu 45 Ser Leu Thr	Gln 30 Glu Asp Leu Cys Arg 110	Val Leu Asn Ser Val 95	Leu Ser Phe Leu 80 Asp
Leu 1 Ile Phe Thr Leu 65 Cys	Gly Gln Val 50 Phe Gln	Ala Leu 35 Pro His Thr Ile Asp 115	Arg 20 Pro Leu Leu Arg 100 Ile	5 Asp Gln Leu Gly Asn 85	Leu Gly Gly Lys 70 Ser Gly	His Gly Cys 55 Leu Arg Val	Val Glu 40 Gln Ser ser Arg	Met 25 Ala Asp Pro Pro Gln 105 Val	10 Pro Gln Leu Glu Gly 90 Gln His	Ala Pro Ala Leu 75 Ser Thr	Pro Pro Gln 60 Leu His Phe	Gly Leu 45 Ser Leu Thr Val Ala 125	Gln 30 Glu Asp Leu Cys Arg 110	Val Leu Asn Ser Val 95 Arg	Leu Ser Phe Leu 80 Asp Ile Gly

<210> 413 <211> 143 <212> PRT

<213> homo sapiens <400> 413 Thr Leu Asp Phe Glu Thr Cys Ser Cys Gln Leu Arg Phe Cys 15 1 5 10 Ser Gln Ser Ser Pro Arq Val Glu Arg Pro Ser Leu Leu Leu Ser Pro 20 25 30 Ser Leu Ala Ala Thr Trp Arg Arq Val Thr Ile Ser Ser Cys Leu Arq 40 45 Ala Ser Ser Ser Ser Ala Ser Val Ser Thr Leu Val Ser Ser Leu Ser 55 60 50 Gly Val Ser Thr Gly Pro Ser Thr Ala Arg Ala Ala Thr Pro Val Arg 65 70 75 80 Gly Glu Phe Thr Ser Val Met Glu Ser Asp Ser Arg Pro Leu Leu Arq 85 90 Gly Arg Asp Glu Ser Met Phe Pro Pro Ile Ser Trp Pro Ala Arq Leu 100 105 110 Glu Gly Glu Arg Val Ala Gly Ala Met Gly Ala Arg Ala Ala Pro Ala 125 115 120 Thr Val His Thr Ser Gln Arg Asn Cys Pro Arg Arg Phe Arg Leu 130 140 135 <210> 414 <211> 105 <212> PRT <213> homo sapiens <400> 414 Gly Arq Gly Ala Leu Trp Trp Ala Ala Lys Glu Leu Arg Arg Thr 5 15 Ser Tyr Val Gly Lys Asn Glu Lys Thr Lys Ile Ile Lys Leu Asp 20 Gly Ile GlnGln Gly Ala Pro Ala Arg Glu Pro Ile Ala Lys Gln Arg 45 35 40 Ile Ser Ser Glu Glu Gln Lys Gln Leu Leu Tyr Tyr His Arg Arg Met 50 55 60 Asp Gln Glu Glu Leu Lys Arg Leu Glu Glu Asn Asp Asp Ala Tyr Leu 65 70 75 80 Thr Leu Phe His Asn Ser Pro Trp Ala Asp Asn Ala Lys Arg His Gly 90 95 85 Val Lys Ile Lys Trp Arg Pro Arg Asp 100 105

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<211> 386

<212> PRT

<213> homo sapiens

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Gly	Pro	Gln 35	Thr	Ser	Arg	Leu	Gly 40	Gly	Pro	Pro	Ser	Pro 45	Ser	Ala	Thr
Trp	Ser 50	Val	Phe	Trp	Gln	Leu 55	Pro	Arg	Gln	Gln	Ser 60	Leu	Pro	Gly	Arg
Gly 65	Ser	Ala	Asn	Leu	Leu 70	Pro	Ser	Val	Arg	Ser 75	Glu	Ser	Ala	Val	Leu 80
Ser	Asp	Cys	Val	Gly 85	Gly	Phe	Pro	Gly	Arg 90	Ser	Ser	Val	Arg	Ala 95	Trp
Ile	Ala	Gly	Pro 100	Arg	Cys	Thr	Pro	Ala 105	Ser	Pro	Thr	Arg	Val 110	Leu	Ser
Leu	Ser	Trp 115	Arg	Leu	Phe	Asn	Ser 120	Ala	Ser	Leu	Leu	Leu 125	Leu	Ala	Thr
Ser	Thr 130	Ser	Gly	Ser	Glu	Cys 135	Arg	Phe	Pro	Arg	Ser 140	Pro	Arg	Ala	Arg
Glu 145	Arg	Gly	Ile	Pro	Asp 150	Cys	Glu	Arg	Leu	Leu 155	Val	Arg	Arg	Ser	Cys 160
Trp	Arg	Ser	Gly	Asp 165	Pro	Arg	Pro	Ala	Gly 170	Pro	Ala	Gly	His	Ala 175	Ala
Gly	Ala	Phe	Ser 180	Thr	Pro	Gln	Tyr	Leu 185	Gly	Gly	Thr	Ala	Met 190	Val	Leu
Leu	His	Val 195	Lys	Arg	Gly	Asp	Glu 200	Ser	Gln	Phe	Leu	Leu 205	Gln	Ala	Pro
Gly	Ser 210	Thr	Glu	Leu	Glu	Glu 215	Leu	Thr	Val	Gln	Val 220	Ala	Arg	Val	Tyr
Asn 225	Gly	Arg	Leu	Lys	Val 230	Gln	Arg	Leu	Cys	Ser 235	Glu	Met	Glu	Glu	Leu 240
Ala	Glu	His	Gly	Ile 245	Phe	Leu	Pro	Pro	Asn 250	Met	Gln	Gly	Leu	Thr 255	Asp
Asp	Gln	Ile	Glu 260	Glu	Leu	Lys	Leu	Lys 265	Asp	Glu	Trp	Gly	Glu 270	Lys	Cys
Val	Pro	Ser 275	Gly	Gly	Ala	Val	Phe 280	Lys	Lys	Asp	Asp	Ile 285	Gly	Arg	Arg
Asn	Gly 290	Gln	Ala	Pro	Asn	Glu 295	Lys	Met	Lys	Gln	Val 300	Leu	Lys	Lys	Thr

Ile 305	Glu	Glu	Ala	Lys	Ala 310	Ile	Ile	Ser	Lys	Lys 315	Gln	Val	Glu	Ala	Gly 320
Val	Cys	Val	Thr	Met 325	Glu	Met	Val	Lys	Asp 330	Ala	Leu	Asp	Gln	Leu 335	Arg
Gly	Ala	Val	Met 340	Ile	Val	Tyr	Pro	Met 345	Gly	Leu	Pro	Pro	Tyr 350	Asp	Pro
Ile	Arg	Met 355	Glu	Phe	Glu	Asn	Lys 360	Glu	Asp	Leu	Ser	Gly 365	Thr	Gln	Ala
Gly	Leu 370	Asn	Val	Ile	Lys	Glu 375	Ala	Glu	Ala	His	Cys 380	Gly	Gly	Gln	Pro
Arg 385	Ser														
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Gly	Ser	Pro	Asp 20	Arg	Gln	Gln	Leu	Arg 25	Arg	Thr	Asn	Ser	Arg 30	Ser	Gln
Ser	Gly	Ile 35	Pro	Arg	Ser	Leu	Ala 40	Arg	Gly	Glu	Arg	Gly 45	Lys	Arg	His
Ser	Leu 50	Pro	Glu	Val	Asp	Val 55	Ala	Lys	Ser	Asn	Ser 60	Glu	Ala	Glu	Leu
Lys 65	Ser	Arg	Gln	Leu	Lys 70	Leu	Arg	Thr	Arg	Val 75	Gly	Glu	Ala	Gly	Val 80
His	Arg	Gly	Pro	Ala 85	Ile	Gln	Ala	Arg	Thr 90	Glu	Leu	Arg	Pro	Gly 95	_
Pro	Pro	Thr	Gln 100	Ser	Glu	Arg	Thr	Ala 105	Asp	Ser	Glu	Arg	Thr 110	Asp	Gly
Arg	Arg	Phe 115	Ala	Asp	Pro	Leu	Pro 120	Gly	Ser	Asp	Cys	Cys 125	Arg	Gly	Asn
Cys	Gln 130	Asn	Thr	Asp	Gln	Val 135	Ala	Glu	Gly	Glu	Gly 140	Gly	Pro	Pro	Asn
Arg 145	Leu	Val	Trp	Gly	Pro 150	Arg	Phe	Pro	Leu	Arg 155	Glu	Ile	Arg	Gly	Leu 160
Arg	Trp	Glu	Leu	Leu 165	Asp	Gly	Glu	Arg	Glu 170	Ile	Arg	Arg	Glu	Pro 175	Gln
Ser	Arg	Ser	Ser 180	Ala	Ala										

<211> 467

<212> PRT

<213> homo sapiens

His 1	Thr	Leu	Ser	Arg 5	Trp	Thr	Lys	His	Ser 10	Ile	Pro	Arg	Trp	Asn 15	Asp
Ala	Arg	Thr	Asp 20	Asp	Thr	Trp	His	Ser 25	Glu	Leu	Asp	Met	Arg 30	Lys	Ile
Gly	Gln	Ala 35	Arg	Asn	Thr	Leu	Met 40	Asp	Met	Arg	Leu	Ser 45	Gln	Val	Ser
Asp	Ser 50	Val	Ser	Gly	Gln	Thr 55	Val	Val	Asp	Pro	Lys 60	Gly	Tyr	Leu	Thr
Asp 65	Leu	Asn	Ser	Met	Ile 70	Pro	Thr	His	Gly	Gly 75	Asp	Ile	Asn	Asp	Ile 80
Lys	Lys	Ala	Arg	Leu 85	Leu	Leu	Lys	Ser	Val 90	Arg	Glu	Thr	Asn	Pro 95	His
His	Pro	Pro	Ala 100	Trp	Ile	Ala	Ser	Ala 105	Arg	Leu	Glu	Glu	Val 110	Thr	Gly
Lys	Leu	Gln 115	Val	Ala	Arg	Asn	Leu 120	Ile	Met	Lys	Gly	Thr 125	Glu	Met	Cys
Pro	Lys 130	Ser	Glu	Asp	Val	Trp 135	Leu	Glu	Ala	Ala	Arg 140	Leu	Gln	Pro	Gly
Asp 145	Thr	Ala	Lys	Ala	Val 150	Val	Ala	Gln	Ala	Val 155	Arg	His	Leu	Pro	Gln 160
Ser	Val	Arg	Ile	Tyr 165	Ile	Arg	Ala	Ala	Glu 170	Leu	Glu	Thr	Asp	Ile 175	Arg
Ala	Lys	Lys	Arg 180	Val	Leu	Arg	Lys	Ala 185	Leu	Glu	His	Val	Pro 190	Asn	Ser
Val	Arg	Leu 195	Trp	Lys	Ala	Ala	Val 200	Glu	Leu	Glu	Glu	Pro 205	Glu	Asp	Ala
Arg	Ile 210	Met	Leu	Ser	Arg	Ala 215	Val	Glu	Cys	Cys	Pro 220	Thr	Ser	Val	Glu
Leu 225	Trp	Leu	Ala	Leu	Ala 230	Arg	Leu	Glu	Thr	Tyr 235	Glu	Asn	Ala	Arg	Lys 240
Val	Leu	Asn	Lys	Ala 245	Arg	Glu	Asn	Ile	Pro 250	Thr	Asp	Arg	His	Ile 255	Trp
Ile	Thr	Ala	Ala 260	Lys	Leu	Glu	Glu	Ala 265	Asn	Gly	Asn	Thr	Gln 270	Met	Val
Glu	Lys	Ile 275	Ile	Asp	Arg	Ala	Ile 280	Thr	Ser	Leu	Arg	Ala 285	Asn	Gly	Val
Glu	Ile 290	Asn	Arg	Glu	Gln	Trp 295	Ile	Gln	Asp	Ala	Glu 300	Glu	Суѕ	Asp	Arg

315 320 320 320 325 320 325 320 325																
Asp Ser Cys Val Ala His Asn Ala Ala Glu Cys Ala Arg Ala Ala Tyr Ala Ala His Asn Ala Ala Ser Lys Lys Ser Val Trp Leu Arg Ala Arg		Gly	Ser	Val	Ala		Cys	Gln	Ala	Val		Arg	Ala	Val	Ile	Gly 320
Ala Tyr Ala Leu Gln Val Phe Pro Ser Lys Lys Ser Val Trp Leu Arg 350 Ala Ala Tyr Phe Glu Lys Asn His Gly Thr Arg Glu Ser Leu Glu Ala 370 Leu Leu Gln Arg Ala Val Ala His Cys Pro Lys Ala Glu Val Leu Trp 385 Leu Met Gly Ala Lys Ser Lys Trp Leu Ala Gly Asp Val Pro Ala Ala Ala Ala 425 Arg Ser Ile Leu Ala Leu Ala Phe Gln Ala Asn Pro Asn Ser Glu Glu Ala 420 Ile Trp Leu Ala Ala Val Lys Leu Glu Ser Glu Asn Asp Glu Tyr Glu 445 Arg Ala Arg Arg Leu Leu Ala Lys Ala Arg Thr Val Pro Pro Pro Ass Ala Callo 445 Arg Ala Arg Arg Leu Leu Ala Lys Ala Arg Thr Val Pro Pro Pro Pro 465 Gly Cys Ser 465 Gly Pro Leu Val Leu Ile Ile Leu Gly Leu Glu Glu Glu Glu Glu Glu Glu Glu Glu Gl	Ile	Gly	Ile	Glu		Glu	Asp	Arg	Lys		Thr	Trp	Met	Glu	_	Ala
Ala Ala Tyr Phe Glu Lys Asn His Gly Thr Arg Glu Ser Leu Glu Ala 370 Leu Leu Gln Arg Ala Val Ala His Cys Pro Lys Ala Glu Val Leu Trg 385 Leu Met Gly Ala Lys Ser Lys Trp Leu Ala Gly Asp Val Pro Ala Ala Ala Ala Val Lys Leu Glu Ala Gly Asp Val Pro Ala Ala Ala Ala Val Lys Leu Glu Ser Glu Asn Asp Glu Tyr Glu 435 Arg Ser Ile Leu Ala Ala Val Lys Leu Glu Ser Glu Asn Asp Glu Tyr Glu 435 Arg Ala Arg Arg Leu Leu Ala Lys Ala Arg Thr Val Pro Pro Pro 455 Gly Cys Ser 465 Gly Cys Ser 465 The Pro Gly Arg Trp Gly His Cys Pro Arg Leu Gly Gln Gln Pro Pro 15 Gly Pro Leu Val Leu Ile Ile Leu Gly Leu Gln Leu His Gly Cys Gln 35 Ala Pro Cys Cys Arg His Ile Pro Cys Gln Pro Leu Gly His Ser Pro Leu Gln Glu Cys Pro Gln Glu Cys Pro Gln Gly Cys Pro Arg Glu Gly Gln Asp Asp Glu Tyr Glu Ala Sch Glu Fro Cys Pro Arg Leu Gly His Ser Pro Leu Gly Gln Glu Cys Pro Arg Leu Gly Gln Gln Asp Asp Glu Glu Asp Arg Glu Glu Glu Gly Gln Asp Asp Glu	Asp	Ser	Cys		Ala	His	Asn	Ala		Glu	Cys	Ala	Arg		Ile	Tyr
Leu Leu Gln Arg Ala Val Ala His Cys Pro Lys Ala Glu Val Leu Trg 385 Leu Met Gly Ala Lys Ser Lys Trp Leu Ala Gly Asp Val Pro Ala Ala Ala Ala His Cys Pro Lys Ala Gly Asp Val Pro Ala Ala Ala Ala Ala His Cys Pro Lys Ala Gly Asp Val Pro Ala Ala Ala Ala Ala Ala Leu Ala Phe Gln Ala Asn Pro Asn Ser Glu Glu Glu 425 Ile Trp Leu Ala Ala Val Lys Leu Glu Ser Glu Asn Asp Glu Tyr Glu 445 Arg Ala Arg Arg Arg Leu Leu Ala Lys Ala Arg Thr Val Pro Pro Pro Pro 450 Gly Cys Ser 465 Gly Cys Ser 445 Thr Pro Gly Arg Trp Gly His Cys Pro Arg Leu Gly Gln Gln Pro Pro 15 Gly Pro Leu Val Leu Ile Ile Leu Gly Leu Gln Leu His Gly Cys Gln 30 Pro Asp Leu Leu Thr Val Gly Val Gly Leu Gln Gly Gln Gly Gln Asp Ala Pro Cys Cys Arg His Ile Pro Cys Gln Pro Leu Gly His Ser Pro Leu 65 Glu Cys Phe Gln Gly Leu Cys Phe Gly Ala Val Gly His Ser Pro Leu 65 His Glu Pro Gln His Leu Cys Phe Gly Ala Val Gly His Ser Pro Leu 65 Gln Glu Cys Phe Gln Gly Leu Pro Ser Ala Met Val Leu Leu Glu Val Arg Gly Val Gly Val Gly Val Gly Leu Glu His Leu Glu Gly Gln Gly Gln Gly Val Gly Val Gly Val Gly Val Gly Val Gly Val Gly Leu Glu His Leu Glu Gly Gln Gly Val Gly Val Gly Val Gly Val Gly Val Gly Val Gly His Ser Pro Leu Gln Gly Val Gly Val Gly Val Gly Val Gly His Ser Pro Leu Gln Gly Val Gly	Ala	Tyr		Leu	Gln	Val	Phe		Ser	Lys	Lys	Ser		Trp	Leu	Arg
385 390 395 400 Leu Met Gly Ala Lys Ser Lys Trp Leu Ala Gly Asp Val Pro Ala Ala Ala Arg Ser Ile Leu Ala Leu Ala Phe Gln Ala Asn Pro Asn Ser Glu Glu Glu 425 Ile Trp Leu Ala Ala Val Lys Leu Glu Ser Glu Asn Asp Glu Tyr Glu 435 Arg Ala Arg Arg Leu Leu Ala Lys Ala Arg Thr Val Pro Pro Pro Pro 465 Gly Cys Ser 465 C210> 418 C210> 418 C211> 352 C212> PRT C213> homo sapiens C400> 418 Thr Pro Gly Arg Trp Gly His Cys Pro Arg Leu Gly Gln Gln Pro Pro 15 Gly Pro Leu Val Leu Ile Ile Leu Gly Leu Gln Leu His Gly Cys Gln 25 Ala Pro Cys Cys Arg His Ile Pro Cys Gln Pro Leu Gly Gln Asp 60 Ala Pro Cys Cys Arg His Ile Pro Cys Gln Pro Leu Gly Leu Gly Leu Gly Ala 60 Ris Glu Pro Gln His Leu Cys Phe Gly Ala Val Gly His Ser Pro Leu Gln Gly Gln Gln Cys Pro Arg Glu Gly Gln Glo Pro Leu Gln Gly Cys Gln Gln Gln Cys Pro Arg Gly Ala Gly Al	Ala	-	Tyr	Phe	Glu	Lys		His	Gly	Thr	Arg		Ser	Leu	Glu	Ala
Arg Ser Ile Leu Ala Leu Ala Phe Gln Ala Asn Pro Asn Ser Glu Glu Glu His Gly Cys Ser 410		Leu	Gln	Arg	Ala		Ala	His	Cys	Pro		Ala	Glu	Val	Leu	Trp 400
11e Trp Leu Ala Ala Val Lys Leu Glu Ser Glu Asn Asp Glu Tyr Glu Asn Asp	Leu	Met	Gly	Ala	-	Ser	Lys	Trp	Leu		Gly	Asp	Val	Pro		Ala
Arg Ala Arg Arg Leu Leu Ala Lys Ala Arg Thr Val Pro Pro Pro Pro Arg Leu Gly Gln Gln Gln Pro 15 Gly Pro Arg Leu Gln Leu Gly Gln Gln Arg Gly Ala Pro Pro Pro 10 Gly Arg Trp Gly His Cys Pro Arg Leu Gly Gln Gln Gln Pro 15 Gly Pro Arg Leu Gly Gln Gln Arg Gly Gln Gln Arg Gly Pro Arg Leu Gly Gln Gln Gln Pro Pro 10 Gly Pro Leu Val Leu Ile Ile Leu Gly Leu Gln Leu His Gly Cys Gln 30 Gly Pro Arg Leu Gln Gly Gln Gln Arg Gly Pro Arg Leu Gly Gln Gln Gly Gln Arg Gly Pro Arg Leu Gly Gln Gly Gln Arg Gly Pro Arg Leu Gly Gln Gly Gln Arg Arg Gly Ala Pro Cys Gln Pro Leu Gly Gln Gly Gln Arg Arg Gly Pro Gln His Leu Cys Pro Cys Gln Pro Leu Gly Leu Gly Ala Gly Gln Gly Gln Gly Ala Gly Gln Gln Gln Gly Gln Gln Gln Gly Gln	Arg	Ser	Ile		Ala	Leu	Ala	Phe		Ala	Asn	Pro	Asn		Glu	Glu
Gly Cys Ser 465 C210> 418 C211> 352 C212> PRT C213> homo sapiens C400> 418 Thr Pro Gly Arg Trp Gly His Cys Pro Arg Leu Gly Gln Gln Pro Pro 1	Ile	Trp		Ala	Ala	Val	Lys		Glu	Ser	Glu	Asn	_	Glu	Tyr	Glu
465 2210	Arg		Arg	Arg	Leu	Leu		Lys	Ala	Arg	Thr		Pro	Pro	Pro	Pro
Second S	_	Cys	Ser													
Thr Pro Gly Arg Trp Gly His Cys Pro Arg Leu Gly Gln Gln Pro Pro 15 Pro 15 Pro 15 Pro 15 Pro 16 Pro 15 Pro 15 Pro 15 Pro 16 Pro 17 Pro 18 Pro 1	<211> <212>	352 PRT	sapie	ens												
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Ala Pro Cys Cys Arg His Ile Pro Cys Gln Pro Leu Gly Leu Gly Ala 50 His Glu Pro Gln His Leu Cys Phe Gly Ala Val Gly His Ser Pro Leu 65 Gln Glu Cys Phe Gln Gly Leu Pro Ser Ala Met Val Leu Leu Glu 95 Arg Gly Ala Gln Pro His Thr Leu Leu Ala Gly Glu His Leu Gln Gly Gly Val Gly Tyr Thr	Gly	Pro	Leu		Leu	Ile	Ile	Leu	_	Leu	Gln	Leu	His		Cys	Gln
His Glu Pro Gln His Leu Cys Phe Gly Ala Val Gly His Ser Pro Leu 65 Gln Glu Cys Phe Gly Ala Wal Gly His Ser Pro Leu 80 Gln Glu Cys Phe Gln Gly Leu Pro Ser Ala Met Val Leu Leu Glu Val 85 Arg Gly Ala Gln Pro His Thr Leu Leu Ala Gly Glu His Leu Gln Gly 100 Gly 105 Thr Leu Gln Gly Ile Val Gly Tyr Thr	Pro	Asp		Leu	Thr	Val	Gly		Gly	Leu	Glu	Gly		Gly	Gln	Asp
65 70 75 80 Gln Glu Cys Phe Gln Gly Leu Pro Ser Ala Met Val Leu Leu Glu Val 85 90 Gly Ala Gln Pro His Thr Leu Leu Ala Gly Glu His Leu Gln Gly 100 To 105 Thr Leu Gln Gly Ile Val Gly Tyr Thr	Ala		Cys	Cys	Arg	His		Pro	Cys	Gln	Pro		Gly	Leu	Gly	Ala
Arg Gly Ala Gln Pro His Thr Leu Leu Ala Gly Glu His Leu Gln Gly 100 105 110 Val Gly Val Asp Gly Ser Cys Thr Leu Gln Gly Ile Val Gly Tyr Thr		Glu	Pro	Gln	His		Cys	Phe	Gly	Ala		Gly	His	Ser	Pro	Leu 80
100 105 110 Val Gly Val Asp Gly Ser Cys Thr Leu Gln Gly Ile Val Gly Tyr Thr	Gln	Glu	Cys	Phe		Gly	Leu	Pro	Ser		Met	Val	Leu	Leu		Val
	Arg	Gly	Ala		Pro	His	Thr	Leu		Ala	Gly	Glu	His		Gln	Gly
	Val	Gly		Asp	Gly	Ser	Cys		Leu	Gln	Gly	Ile		Gly	Tyr	Thr

Thr	Val 130	Ser	Ile	Leu	His	Pro 135	Gly	Met	Leu	Pro	Ile 140	Phe	Leu	Leu	Asn
Pro 145	Asn	Pro	Asn	His	Gly 150	Thr	His	Asp	Gly	Leu 155	Ala	Gly	Gly	His	Thr 160
Pro	Ser	Pro	Val	Thr 165	Phe	Leu	Gly	Ile	Leu 170	Asp	Pro	Leu	Leu	Thr 175	Val
Asp	Leu	His	Thr 180	Val	Gly	Pro	Gln	Arg 185	Gly	Asp	Gly	Ser	Val 190	Asp	Asp
Leu	Leu	His 195	His	Leu	Arg	Val	Pro 200	Ile	Gly	Phe	Leu	Gln 205	Leu	Ser	Ser
Arg	Asp 210	Pro	Asp	Met	Ser	Val 215	Cys	Arg	Asn	Val	Leu 220	Pro	Arg	Leu	Val
Gln 225	Asp	Leu	Ala	Gly	Ile 230	Phe	Ile	Gly	Leu	Gln 235	Pro	Cys	Gln	Ser	Lys 240
Pro	Glu	Leu	His	Ala 245	Gly	Gly	Ala	Ala	Leu 250	His	Ser	Ser	Ala	Gln 255	His
Asp	Ser	Ser	Ile 260	Phe	Arg	Phe	Phe	Gln 265	Leu	Asn	Gly	Cys	Phe 270	Pro	Gln
Ala	Asn	Arg 275	Val	Trp	Asn	Met	Leu 280	Glu	Gly	Phe	Pro	Lys 285	Asn	Pro	Leu
Leu	Cys 290	Thr	Asn	Val	Arg	Phe 295	Gln	Leu	Cys	Gly	Ser 300	Asp	Val	Asn	Pro
Asp 305	Arg	Leu	Trp	Glu	Met 310	Thr	Asp	Ser	Leu	Gly 315	Tyr	His	Gly	Leu	Gly 320
Cys	Val	Pro	Arg	Leu 325	Gln	Pro	Gly	Cys	Phe 330	Gln	Pro	Asp	Ile	Phe 335	Thr
Leu	Gly	Ala	His 340	Leu	Arg	Pro	Leu	His 345	Asp	Lys	Val	Pro	Ser 350	Tyr	Leu
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Ile	Lys	Thr	Phe 20	Asn	Glu	Gly	Gly	His 25	Ser	Ser	Glu	Pro	Phe 30	His	Met
Arg	Pro	Asn 35	Pro	Ala	Pro	Arg	Arg 40	Pro	Ala	Met	Ala	Thr 45	Ala	Gln	Ser
Glu	Gly 50	Val	Leu	Asp	Ala	Ala 55	Gly	His	Gln	Pro	Lys 60	Asp	Val	Pro	Asp
Leu	Len	Leu	Pro	Val	Glv	Asn	Val	Len	Glv	His	Glv	Δla	Pro	Gln	Len

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<212> PRT

<213> homo sapiens

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#

Mi

h.i.

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Gly 145	Phe	Glu	Ile	Val	Arg 150	Pro	Gly	His	Pro	Cys 155	Val	Pro	Ser	Arg	Pro 160
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Ser	Thr	Glu 35	Pro	Val	Lys	Leu	Glu 40	Asn	Asn	Trp	Asp	Thr 45	Glu	Pro	Pro
Leu	Pro 50	Lys	Leu	Arg	Leu	Glu 55	Leu	Glu	Pro	Asp	Leu 60	Glu	Leu	Glu	Leu
L ys 65	Leu	Glu	Leu	Glu	Ser 70	Thr	Pro	Gly	Lys	Glu 75	Leu	Lys	Pro	Gly	Leu 80

Gly Ile Gly Gly Pro Thr Ser Pro Lys Ser Pro Ala Ala Trp Pro Arg

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Thr 155

Ser Ala Glu Leu Gln 160

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Arg	Ser	Phe	Thr	Cys 85	Thr	Gln	Ser	Glu	Trp 90	His	Gly	Trp	Met	Val 95	Ser
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85 90 95

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Lys	Ser 130	Lys	Glu	Asp	Leu	Val 135	Ser	Gln	Gly	Phe	Thr 140	Glu	Phe	Thr	Ile
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Gln	Thr	Ser	Val	Ala 165	Asp	Leu	Leu	Ala	Ser 170	Phe	Asn	Asp	Gln	Ser 175	Thr
Ser	Asp	Tyr	Leu 180	Val	Val	Tyr	Leu	Arg 185	Leu	Leu	Thr	Ser	Gly 190	Tyr	Leu
Gln	Arg	Glu 195	Ser	Lys	Phe	Phe	Glu 200	His	Phe	Ile	Glu	Gly 205	Gly	Arg	Thr
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Gln	Val	Glu	Tyr	Met 245	Asp	Arg	Gly	Glu	Gly 250	Gly	Thr	Thr	Asn	Pro 255	His
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Cys	Gln 50	Ser	Gly	Trp	Ser	Ser 55	Arg	Ser	Tyr	Thr	Arg 60	Ser	Met	Leu	Lys
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Ser	Gly	Ser 115	Arg	Leu	Cys	Leu	Pro 120	Arg	Ala	Arg	Lys	Thr 125	Trp	Cys	Pro
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Val	Glu 130	Ile	Leu	Asn	Cys	Glu 135	Phe	Ser	Glu	Ala	Leu 140	Gly	His	Gln	Val
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Gln	Ala	Val 275	His	Pro	Val	His	Val 280	Lys	Glu	Glu	Pro	Leu 285	Asp	Pro	Glu
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Pro 65	Leu	Cys	His	His	Asn 70	His	Gln	His	Ala	His 75	Gly	Gly	Thr	His	Pro 80
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Cys	Thr	Gly 35	Cys	Thr	Ala	Cys	Ile 40	Gly	Asp	Leu	Pro	Gly 45	Leu	Leu	Ser
Leu	Ser 50	Leu	Leu	Leu	Val	Cys 55	Ser	Ile	Ala	Pro	Phe 60	Ser	Ser	Ser	Arg
Ile 65	Ala	Leu	Ala	Lys	Leu 70	Pro	Arg	Val	Gly	Phe 75	Pro	Met	Glu	Ala	Val 80
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Arg 145	Ser	Phe	Arg	Ser	His 150	Val	Val	Arg	Glu	Asp 155	Leu	Asn	Pro	Arg	Trp 160
Asn	Glu	Val	Phe	Glu 165	Val	Ile	Val	Thr	Ser 170	Val	Pro	Gly	Gln	Glu 175	Leu
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Asn	Arg 50	Met	Phe	Pro	Leu	Leu 55	His	Gly	Leu	Tyr	Pro 60	Ser	Gly	Pro	Leu
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Thr	Val 50	Val	Arg	Arg	Thr	Leu 55	His	Leu	Pro	Arg	Lys 60	Ser	Ser	Leu	Ser
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      Thr
           Thr
                Trp
                    Leu
                         Arg
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Phe	Pro	Glu	Thr	Lys 165	Leu	Asp	Lys	Lys	Lys 170	Tyr	Pro	Tyr	Trp	Pro 175	His
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Phe	Ile	Asn	Ser 20	Gln	Leu	Val	Gly	Glu 25	Ala	Asn	Arg	Asp	Thr 30	Phe	Ser
Суз	Leu	Ile 35	Trp	Phe	Leu	Gly	Lys 40	Leu	His	Ser	Ser	Pro 45	Gln	Trp	Ser
Ser	Asp 50	Gln	Met	Glu	Leu	Ser 55	Ser	Ser	Ser	Ser	Pro 60	Ser	Leu	Ser	His
Ile 65	Leu	Gln	Ser	Trp	Pro 70	Leu	Arg	Glu	Thr	Pro 75	Thr	Gln	His	Lys	Ile 80
Ser	His	Leu	Leu	Phe 85	Leu	Arg	His	Pro	Pro 90	Gly	Gln	Tyr	Ile	Tyr 95	Pro
Leu	Ala	Arg	Glu	Pro	Ser	Ala	His								

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<212> PRT

<213> homo sapiens

<400> 458

Arg 1	Gly	Ala	Gly	Gly 5	His	Gln	Gly	Glu	Ser 10	Gly	Arg	Pro	Glu	Gly 15	Trp
Pro	Pro	Pro	Phe 20	Leu	His	Pro	Arg	Gly 25	Arg	Phe	Gln	Val	Pro 30	Trp	Leu
Glu	Ser	Val 35	Leu	Ile	Val	Val	Ser 40	Asn	Asn	Ile	Asp	Glu 45	Glu	Ala	Leu
Ala	Arg 50	Leu	Ala	Gln	Glu	Gly 55	Ser	Glu	Val	Asn	Val 60	Ile	Gly	Ile	Gly
Thr 65	Ser	Val	Val	Thr	Cys 70	Pro	Gln	Gln	Pro	Ser 75	Leu	Gly	Gly	Val	Tyr` 80
Lys	Leu	Val	Ala	Val 85	Gly	Gly	Gln	Pro	Arg 90	Met	Lys	Leu	Thr	Glu 95	Asp
Pro	Glu	Lys	Gln 100	Thr	Leu	Pro	Gly	Ser 105	Lys	Ala	Ala	Phe	Arg 110	Leu	Leu
Gly	Ser	Asp 115	Gly	Ser	Pro	Leu	Met 120	Asp	Met	Leu	Gln	Leu 125	Ala	Glu	Glu
Pro	Val 130	Pro	Gln	Ala	Gly	Gln 135	Glu	Leu	Arg	Val	Trp 140	Pro	Pro	Gly	Ala
Gln 145	Glu	Pro	Cys	Thr	Val 150	Arg	Pro	Ala	Gln	Val 155	Glu	Pro	Leu	Leu	Arg 160
Leu	Cys	Leu	Gln	Gln 165	Gly	Gln	Leu	Cys	Glu 170	Pro	Leu	Pro	Ser	Leu 175	Ala
Glu	Ser	Arg	Ala 180	Leu	Ala	Gln	Leu	Ser 185	Leu	Ser	Arg	Leu	Ser 190	Pro	·Glu
His	Arg	Arg 195	Leu	Arg	Ser	Pro	Ala 200	Gln	Tyr	Gln	Val	Val 205	Leu	Ser	Glu
Arg	Leu 210	Gln	Ala	Leu	Val	Asn 215	Ser	Leu	Cys	Ala	Gly 220	Gln	Ser	Pro	

<210> 459

<211> 157

<212> PRT

<213> homo sapiens

<400> 459

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Cys Pro Ala His Arg Leu Phe Thr Arg Ala Cys Ser Leu Ser Asp Ser
20 25 30

Thr	Thr	Trp 35	Tyr	Cys	Ala	Gly	Leu 40	Arg	Ser	Arg	Leu	Cys 45	Ser	Gly	Leu
Ser	Arg 50	Leu	Arg	Asp	Ser	Trp 55	Ala	Lys	Ala	Leu	Asp 60	Ser	Ala	Arg	Asp
Gly 65	Ser	Gly	Ser	His	Ser 70	Cys	Pro	Cys	Trp	Arg 75	Gln	Ser	Arg	Ser	Ser 80
Gly	Ser	Thr	Trp	Ala 85	Gly	Leu	Thr	Val	Gln 90	Gly	Ser	Trp	Ala	Pro 95	Gly
Gly	His	Thr	Leu 100	Ser	Ser	Cys	Pro	Ala 105	Cys	Gly	Thr	Gly	Ser 110	Ser	Ala
Asn	Суѕ	Ser 115	Met	Ser	Met	Ser	Gly 120	Asp	Pro	Ser	Glu	Pro 125	Arg	Ser	Arg
Lys	Ala 130	Ala	Leu	Leu	Pro	Gly 135	Asn	Val	Cys	Phe	Ser 140	Gly	Ser	Ser	Val
Ser 145	Phe	Ile	Arg	Gly	Trp 150	Pro	Pro	Thr	Ala	Thr 155	Ser	Leu			
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		Leu Cys	Phe Phe 20	5		Leu Ala			10	Trp Val	_		Val Gly 30	15	Asp
1			Phe	5			Pro	Leu 25	10	Val	_		Gly	15	_
1 Ser	Cys	Cys Gln 35	Phe 20 Thr	5 Gln Val	Ser His	Ala	Pro Gly 40	Leu 25 Leu	10 Arg Gln	Val Pro	Ser	Gly Gly 45	Gly 30 Gln	15 Leu	Pro
1 Ser Arg	Cys Thr Val 50	Cys Gln 35	Phe 20 Thr	5 Gln Val Arg	Ser His Ala	Ala Gln Pro 55	Pro Gly 40 Gln	Leu 25 Leu Pro	10 Arg Gln Pro	Val Pro Val	Ser Leu Leu 60	Gly Gly 45 Arg	Gly 30 Gln Ala	15 Leu His Glu	Pro His Ser
Ser Arg Leu Ala 65	Cys Thr Val 50	Cys Gln 35 Leu	Phe 20 Thr Cys	5 Gln Val Arg Leu	Ser His Ala Gly 70	Ala Gln Pro 55	Pro Gly 40 Gln Gly	Leu 25 Leu Pro Ser	10 Arg Gln Pro Arg	Val Pro Val Leu 75	Ser Leu Leu 60	Gly Gly 45 Arg Gln	Gly 30 Gln Ala	15 Leu His Glu	Pro His Ser
Ser Arg Leu Ala 65	Cys Thr Val 50 Gln Leu 461 328 PRT	Cys Gln 35 Leu Gly Thr	Phe 20 Thr Cys Gln	5 Gln Val Arg Leu	Ser His Ala Gly 70	Ala Gln Pro 55 Gln	Pro Gly 40 Gln Gly	Leu 25 Leu Pro Ser	10 Arg Gln Pro Arg	Val Pro Val Leu 75	Ser Leu Leu 60 Cys	Gly Gly 45 Arg Gln	Gly 30 Gln Ala	15 Leu His Glu	Pro His Ser
1 Ser Arg Leu Ala 65 Arg <210> <211> <212>	Cys Thr Val 50 Gln Leu 461 328 PRT homo	Cys Gln 35 Leu Gly Thr	Phe 20 Thr Cys Gln	5 Gln Val Arg Leu	Ser His Ala Gly 70	Ala Gln Pro 55 Gln	Pro Gly 40 Gln Gly	Leu 25 Leu Pro Ser	10 Arg Gln Pro Arg	Val Pro Val Leu 75	Ser Leu Leu 60 Cys	Gly Gly 45 Arg Gln	Gly 30 Gln Ala	15 Leu His Glu	Pro His Ser
1 Ser Arg Leu Ala 65 Arg <210> <211> <212> <213>	Cys Thr Val 50 Gln Leu 461 328 PRT homo	Cys Gln 35 Leu Gly Thr	Phe 20 Thr Cys Gln Gln	5 Gln Val Arg Leu 85	Ser His Ala Gly 70 Ser	Ala Gln Pro 55 Gln Leu	Pro Gly 40 Gln Gly Leu	Leu 25 Leu Pro Ser Glu	10 Arg Gln Pro Arg Ala 90	Val Pro Val Leu 75	Leu Leu 60 Cys	Gly 45 Arg Gln	Gly 30 Gln Ala Gly	Leu His Glu Trp	Pro His Ser

Val	Lys	Ala 35	Ala	Ala	Glu	Ile	Ser 40	Met	Gly	Thr	Glu	Val 45	Ser	Glu	Glu
Asp	Ile 50	Cys	Asn	Ile	Leu	His 55	Leu	Cys	Thr	Gln	Val 60	Ile	Glu	Ile	Ser
Glu 65	Tyr	Arg	Thr	Gln	Leu 70	Tyr	Glu	Tyr	Leu	Gln 75	Asn	Arg	Met	Met	Ala 80
Ile	Ala	Pro	Asn	Val 85	Thr	Val	Met	Val	Gly 90	Glu	Leu	Val	Gly	Ala 95	Arg
Leu	Ile	Ala	His 100	Ala	Gly	Ser	Leu	Leu 105	Asn	Leu	Ala	Lys	His 110	Ala	Ala
Ser	Thr	Val 115	Gln	Ile	Leu	Gly	Ala 120	Glu	Lys	Ala	Leu	Phe 125	Arg	Ala	Leu
Lys	Ser 130	Arg	Arg	Asp	Thr	Pro 135	Lys	Tyr	Gly	Leu	Ile 140	Tyr	His	Ala	Ser
Leu 145	Val	Gly	Gln	Thr	Ser 150	Pro	Lys	His	Lys	Gly 155	Lys	Ile	Ser	Arg	Met 160
Leu	Ala	Ala	Lys	Thr 165	Val	Leu	Ala	Ile	Arg 170	Tyr	Asp	Ala	Phe	Gly 175	Glu
Asp	Ser	Ser	Ser 180	Ala	Met	Gly	Val	Glu 185	Asn	Arg	Ala	Lys	Leu 190	Glu	Ala
Arg	Leu	Arg 195	Thr	Leu	Glu	Asp	Arg 200	Gly	Ile	Arg	Lys	Ile 205	Ser	Gly	Thr
Gly	Lys 210	Ala	Leu	Ala	Lys	Thr 215	Glu	Lys	Tyr	Glu	His 220	Lys	Ser	Glu	Val
Lys 225	Thr	Tyr	Asp	Pro	Ser 230	Gly	Asp	Ser	Thr	Leu 235	Pro	Thr	Cys	Ser	Lys 240
Lys	Arg	Lys	Ile	Glu 245	Gln	Val	Asp	Lys	Glu 250	Asp	Glu	Ile	Thr	Glu 255	Lys
Lys	Ala	Lys	Lys 260	Ala	Lys	Ile	Lys	Val 265	Lys	Val	Glu	Glu	Glu 270	Glu	Glu
Glu	Lys	Val 275	Ala	Glu	Glu	Glu	Glu 280	Thr	Ser	Val	Lys	Lys 285	Lys	Lys	Lys
Arg	Gly 290	Lys	Lys	Lys	His	Ile 295	Lys	Glu	Glu	Pro	Leu 300	Ser	Glu	Glu	Glu
Pro 305	Cys	Thr	Ser	Thr	Ala 310	Ile	Ala	Ser	Pro	Glu 315	Lys	Lys	Lys	Lys	Lys 320
Lys	Lys	Lys	Arg	Glu 325	Asn	Glu	Asp								

<210> 462

<211> 124 <212> PRT

<213> homo sapiens

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Leu	Phe	Leu	Leu 20	Phe	Leu	Trp	Thr	Ser 25	Asn	Cys	Cys	Ala	Gly 30	Thr	Trp
Phe	Phe	Leu 35	Arg	Lys	Trp	Phe	Phe 40	Leu	Asn	Val	Phe	Leu 45	Phe	Thr	Pro
Phe	Leu 50	Leu	Leu	Leu	His	Arg 55	Cys	Phe	Phe	Phe	Phe 60	Cys	His	Phe	Phe
Phe 65	Phe	Leu	Phe	Phe	Asn 70	Phe	Asn	Phe	Asn	Leu 75	Gly	Phe	Phe	Gly	Phe 80
Leu	Phe	Ser	Asn	Phe 85	Ile	Leu	Phe	Ile	Tyr 90	Leu	Phe	Tyr	Phe	Ala 95	Phe
Phe	Arg	Thr	Gly 100	Trp	Lys	Cys	Gly	Val 105	Thr	Arg	Arg	Ile	Val 110	Ser	Leu
His	Phe	Thr 115	Phe	Val	Phe	Ile	Phe 120	Phe	Cys	Phe	Cys				
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<211><212>															
<213>	homo	sapie	ns												
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Ser	Ser	Phe	0	· •					_	_			_		_
1		PHE	Ser	ьeu 5	Phe	Phe	Phe	Phe	Phe 10	Phe	Phe	Phe	Ser	Gly 15	Leu
	Ile	Ala	Val				Phe Gly				Phe Glu			15	Ser
1			Val	5	Val			Ser	10		Glu		Gly	15	
1 Ala	Ile	Ala Cys	Val 20 Phe	5 Leu	Val Leu	His	Gly	Ser 25 Phe	10 Ser Phe	Ser	Glu	Ser Phe	Gly 30 Thr	15 Ser	Ser Val
1 Ala Leu	Ile Met Ser 50	Ala Cys 35	Val 20 Phe Ser	5 Leu Phe Ala	Val Leu Thr	His Pro Phe 55	Gly Leu 40	Ser 25 Phe Ser	10 Ser Phe Ser	Ser Phe	Glu Phe Ser 60	Ser Phe 45 Ser	Gly 30 Thr	15 Ser Asp Leu	Ser Val
1 Ala Leu Ser Leu	Ile Met Ser 50 Ile	Ala Cys 35 Ser	Val 20 Phe Ser	5 Leu Phe Ala Phe	Val Leu Thr	His Pro Phe 55	Gly Leu 40 Ser	Ser 25 Phe Ser	10 Ser Phe Ser	Ser Phe Ser Val	Glu Phe Ser 60 Ile	Ser Phe 45 Ser	Gly 30 Thr Thr	15 Ser Asp Leu Ser	Ser Val Thr
1 Ala Leu Ser Leu 65	Ile Met Ser 50 Ile	Ala Cys 35 Ser	Val 20 Phe Ser Ala Ser	5 Leu Phe Ala Phe	Val Leu Thr	Pro Phe 55	Gly Leu 40 Ser	Ser 25 Phe Ser	10 Ser Phe Ser Ser	Ser Phe Ser Val	Glu Phe Ser 60 Ile	Ser Phe 45 Ser	Gly 30 Thr Thr	Ser Asp Leu Ser	Ser Val Thr Leu 80
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1 Ala Leu Ser Leu 65 Ser <210> <211> <212> <213>	Ile Met Ser 50 Ile Thr Pro 464 427 PRT homo	Ala Cys 35 Ser Leu Cys	Val 20 Phe Ser Ala Ser Gly 100	5 Leu Phe Ala Phe	Val Leu Thr	Pro Phe 55	Gly Leu 40 Ser	Ser 25 Phe Ser	10 Ser Phe Ser Ser	Ser Phe Ser Val	Glu Phe Ser 60	Ser Phe 45 Ser	Gly 30 Thr Thr	Ser Asp Leu Ser	Ser Val Thr Leu 80
1 Ala Leu Ser Leu 65 Ser <210> <211> <212> <213> <400>	Ile Met Ser 50 Ile Thr Pro 464 427 PRT homo	Ala Cys 35 Ser Leu Cys	Val 20 Phe Ser Ala Ser Gly 100	5 Leu Phe Ala Phe Ile 85 Ser	Val Leu Thr Leu 70	Pro Phe 55 Ala Arg	Gly Leu 40 Ser Phe	Ser 25 Phe Ser Phe Leu	10 Ser Phe Ser Ser Glu 90	Ser Phe Ser Val 75 Gln	Glu Phe Ser 60 Ile Val	Ser Phe 45 Ser Ser	Gly 30 Thr Thr Ser	15 Ser Asp Leu Ser Val 95	Ser Val Thr Leu 80 Glu

Leu Gly Gly Gly Trp Ala Leu Val Leu Leu Leu Pro Cys Leu Glu Pro 20 25 30 Arg Pro Arg Asp Ser Leu Glu Glu Leu Val Ile Thr Pro Leu Pro Ser 35 40 45 Asp Val Trp Gly Thr Phe Gln Thr Ala Ala Phe Arg Arg Asp Ser Glu 50 55 60 Phe Gln Ser Tyr Arg Leu Arg Glu Gly Val His Leu Pro Lys Ala Leu 65 70 75 80 Gln Arg Glu Gly Ser Leu Ile Lys Tyr Ser Leu Leu His Leu Ser Phe 90 85 95 Gly Thr Gln Phe Trp Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln 105 100 110 Ser Ala Pro Gly Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr 115 120 125 Asp Val Asp Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile 130 135 140 Phe Cys Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro 145 150 155 160 Gly Thr Ala Ser Phe Lys Pro Leu Leu Ala Asn Asp Thr Asp His Tyr 175 Phe Leu Arq Tyr Ala Val Leu Pro Arg Glu Val Val Cys Thr Glu Asn 180 185 190 Leu Thr Pro Trp Leu Leu Pro Cys Ser Ser Lys Ala Gly Lys Lys Leu 195 200 205 Ser Val Leu Ala Asp Phe His Thr Ser His Leu Lys Arg Leu Tyr Ser 210 215 220 Gln Ala Val His Ile Cys Arg Pro Val Arg Asn Ala Arg Cys Thr Ser 225 230 235 240 Ser Glu Ile Trp Leu Arq Gln Thr Ser Val Ala Phe Leu Val Phe Asp 245 250 255 Gly Ile Thr Gln Gly · Lys Trp Phe Lys Asp Ser Leu Phe Met Ser 260 265 270 Thr Leu Thr Arg Glu Pro Cys Pro Leu Ala Ser Glu Ser Arg Val Tyr 275 280 285 Val Asp Thr Thr Tyr Asn Gln Asp Asn Glu Thr Leu Glu His 290 295 300 Gly Pro Pro Pro Thr Thr Thr Gln Val Ile Leu Thr Tyr Asp Arq Lys 305 315 310 320 Tyr Thr Tyr Ala Ile Asp Leu Leu Asp Ala Met Ile Asn Asn Ser 325 330 335 Trp Arg Asn Leu Asn Ile Gln Leu Lys Lys Arg Pro Pro Glu Asn Glu 340 345 350

Ala	Pro	Pro 355	Val	Pro	Phe	Leu	His 360	Ala	Gln	Arg	Tyr	Val 365	Ser	Gly	Tyr
Gly	Leu 370	Gln	Lys	Gly	Glu	Leu 375	Ser	Thr	Leu	Leu	Tyr 380	Asn	Thr	His	Pro
Tyr 385	Arg	Ala	Phe	Pro	Val 390	Leu	Leu	Leu	Asp	Thr 395	Val	Pro	Trp	Tyr	Leu 400
Arg	Leu	Leu	His	Pro 405	Leu	Pro	Ala	Cys	Pro 410	Gly	Pro	Ala	Ala	Thr 415	Pro
Pro	Pro	Gly	Asp 420	Ala	Asp	Ser	Ala	Ala 425	Gly	Gln					
<210><211><211><212><213>	128 PRT	sapie	ns												
<400>	465														
Ser 1	Pro	Ser	Ile	Leu 5	Tyr	Gly	Ser	Cys	Thr 10	Cys	His	Ser	His	Lys 15	Ala
Phe	Gly	Gly	Pro 20	Asp	Thr	Gly	Gly	His 25	Pro	Ser	Cys	Arg	Pro 30	His	Gln
Val	Gln	Ser 35	Cys	Gly	Ser	Gly	Ser 40	Lys	Thr	Leu	Ser	Leu 45	Met	Trp	Ile
Asn	Leu 50	Gly	Arg	Ser	Ser	Val 55	Met	Ser	Ser	Gln	Gly 60	Ser	Ser	Ala	Pro
Leu 65	Ser	Thr	Ser	Ser	Thr 70	Pro	Pro	Thr	Gln	Ser 75	Leu	Pro	Leu	Pro	Pro 80
Ser	Asn	Pro	Trp	Val 85	Trp	Pro	Met	Thr	Leu 90	Thr	Thr	Thr	Phe	Cys 95	Ala
Met	Leu	Cys	Cys 100	Arg	Gly	Arg	Trp	Ser 105	Ala	Pro	Lys	Thr	Ser 110	Pro	Pro
Gly	Arg	Ser 115	Ser	Cys	Pro	Val	Val 120	Pro	Arg	Gln	Ala	Ser 125	Leu	Cys	Cys
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Pro 1	Gln	Ala	Trp	Arg 5	Arg	Leu	Cys	Arg	Cys 10	Cys	Ser	Ala	Arg	Pro 15	Val
Ala	Pro	Gly	Ala 20	Arg	Arg	Leu	Val	Pro 25	Cys	Arg	Thr	Pro	Thr 30	Arg	Gln
Pro	Ala	Gly 35	Gly	Thr	Cys	His	His 40	Pro	Ala	Ala	Phe	Arg 45	Gly	Arg	Ser

Arg His Ile Pro Val Pro His Ala Leu Gly Phe Gly Ala Ser Ala Gly

Gln

Ser

Tyr

Ala

Thr

Thr

Asp

Thr

Arg

Val

70

Thr

Tyr

Leu

Pro

55

Arg

His

Cys

Glu

Gln

40

Arg

Leu

Lys

Ser

Glu Glu

25

Leu

Gln

Pro

Gly

Pro

Ser Gln

Asp

Glu

Phe

60

Gly

Met

Lys

Ala

Ala

75

Cys

Thr

Pro

45

Pro

Ser

Lys

Arq

Leu

Tyr

Arg

30

55

Ala

Gly

Gln

Thr

70

60

Ile

Ala

Pro Gly Ala Ala

Thr

Pro

110

Lys

Ala

Arg

Ala

Gly

Gln Leu

30

Arg

95

Ile

Glu

Ser

Gly

Ala

Asn

95

Val

Ser

Pro

Pro

Trp

15

His

Asp

Leu

Arg

Pro

Val

Met

Gly

Val

Tyr

Glu

Pro

Pro

Ala

Pro

80

80

80

Gln

Pro

Leu

90

Leu Ser

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Val

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Arg

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Ser

35

Pro

Pro

Lys

Val

20

Asp

Gln

Gly

Glu	Gly	Leu	Ser	Gln 85	Ser	Tyr	Tyr	Arg	Gly 90	Ile	Lys	Arg	Ala	Pro 95	Leu
Leu	Pro	Pro	Gln 100	Pro	Cys	Cys	Glu	Ser 105	Cys	Ala	Gly	Ile	Asn 110	Leu	Arg
Asn	Ser	Pro 115	Glu	Ala	Glu	Thr	Gly 120	Leu	Met	Pro	Trp	Glu 125	Arg	Ser	Glu
Сув	Glu 130	Pro	Met	Ala	Pro	Ser 135	Leu	Leu	Gly	Thr	Asn 140	Leu	Pro	Lys	Tyr
Val 145	Lys	Ala	Glu	Gly	Asp 150	Arg	Asp	Leu	Ala	Glu 155	Gly	Arg	Lys	Ser	Phe 160
Ser	Ser	Arg	Asn												
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Asp	Glu	Phe	Leu 20	Gln	Asn	Arg	Pro	His 25	Thr	Asp	Cys	Pro	Ser 30	Val.	Lys
Leu	Ser	Pro 35	Pro	Thr	Cys	Arg	Thr 40	Thr	Ala	Tyr	Lys	Trp 45	Thr	His	Val
Pro	Gln 50	Arg	Ala	Gln	Ile	Ile 55	Pro	Ser	Arg	Ser	Pro 60	Lys	Asn	Pro	Cys
Arg 65	Leu	Pro	Phe	Pro	Lys 70	Pro	Gly	Pro	Arg	Val 75	Gly	Arg	Phe	His	Thr 80
Pro	Pro	Gln	Gly	Leu 85	Val	Gln	Ser	Gly	Lys 90	Asn	Gln	Gln	Ala	His 95	Ala
Gly	Gln	Arg	Ala 100	Ser	Leu	Ser	Pro	Thr 105	Thr	Glu	Ala				
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Pro	Glu	Asp	Ile 20	Lys	Lys	Ala	Tyr	Arg 25	Lys	Leu	Ala	Leu	Lys 30	Trp	His
Pro	Asp	Lys 35	Asn	Pro	Glu	Asn	Lys 40	Glu	Glu	Ala	Glu	Arg 45	Lys	Phe	Lys
Gln	Val	Ala	Glu	Ala	Tyr	Glu	Val	Leu	Ser	Asp	Ala	Lys	Lys	Arg	Asp

50 55 60 Gly Lys Gly Leu Gly Ile Tyr Lys Tyr Glu Asn Gly Asp 65 70 75

Gly Gly His Phe Asp Ser Pro Phe Glu Phe Phe Thr Phe Arg Asn Ser 85 90 95

Gly

80

Gly

30

Gly

Gly Phe Gly Val Phe Arg Glu Phe Arg Asp Pro Phe Pro Asp Asp Ser 105 100 110

Asp Glu Gly Phe Phe Glu Pro Phe Asp Phe Phe Asn Phe Asp Arg Arg 120 115 125

Gly Pro Ser Arg Gly Thr Gly Ser Phe Phe Arg Gly Ser Arg Ser Ala 130 135 140

Phe Thr Phe Ser Gly Phe Pro Ser Phe Gly Ser Gly Ser Ser Phe Asp 145 150 155 160

Gly Phe Thr Ser Phe Gly Ser Leu Gly His Gly Gly Leu Thr Ser Phe 165 170 175

Ser Ser Thr Ser Phe Gly Gly Ser Gly Met Gly Asn Phe Lys Ser Ile 180 185 190

Thr Ser Thr Met Val Asn Gly Arq Lys Ile Thr Thr Lys Ser Lys Arg 195 200 205

Val Gln Glu Val Glu Val Glu Glu Gly Ile Glu Asn Gly Arg Asp Gln 210 215 220

Thr Ile Asn Gly Val Ala Asp Ala Ala Leu Lys Ser Leu Asp Asp Leu 225 230 235 240

Ala Glu Glu Gly Gln Ala Gln Pro Ala Arg Met Arg Arg Asn Leu Pro 245 250 255

Gly Leu Arg Pro Pro Lys Pro Pro Arg Pro Ala Ser Leu Leu Arg His 260 265 270

His Glu Pro Ala Pro Cys Leu Ser Glu Glu Gly Glu Gln Asp Arg Gly 275 280 285

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Arg Trp Gln Glu Glu Glu Ala Glu Ala Glu Arg Gly Val 305 310 315

<210> 471

<211> 123

<212> PRT

<213> homo sapiens

20

<400> 471

Val Gln Leu Ser Phe Lys Ser Met Pro Leu Pro Ser Leu Leu Leu 5 10 15 Thr Phe Phe Gln Ser Cys Leu Leu Leu Leu Pro Leu Ala Cys Gly Arg

Arg	Gly	Gly 35	Pro	Arg	Ala	Arg	Val 40	Pro	Gln	Val	Gly	Pro 45	Ala	Arg	Pro
Pro	Pro 50	Gln	Arg	Asp	Ser	Glu 55	Ala	Arg	Val	Ser	Ala 60	Ala	Arg	Gln	Ala
Gly 65	Ala	Ala	Ser	Ala	Gly 70	Gly	Gly	Arg	Gln	Ala 75	Gly	Leu	Ala	Gly	Arg 80
Ser	Gly	Leu	Ser	Ala 85	Cys	Ala	Pro	Gln	Arg 90	Gly	His	Arg	Arg	Arg 95	Pro
His	His	Leu	Leu 100	Leu	Arg	Thr	Leu	Thr 105	Gly	His	Leu	Leu	Gln 110	Leu	Leu
Leu	Phe	Leu 115	Asp	Arg	Ser	Arg	Gln 120	Phe	Ser	Leu					
<210><211><212><213>	105 PRT	sapie	ns												
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Lys 1	Ile	Arg	Ser	Asn 5	Gln	Cys	Leu	Trp	Ser 10	Asn	Phe	Leu	Pro	Pro 15	Ser
Asn	Ser	Ser	Leu 20	Cys	Phe	Cys	Phe	Phe 25	Leu	Leu	Pro	Pro	Ser 30	Phe	Asn
Pro	Ala	Ala 35	Asp	Ala	Glu	Gly	Val 40	Pro	Gly	Pro	Gly	Cys 45	Pro	Arg	Ser
Val	Leu 50	Leu	Ala	Leu	Leu	Leu 55	Arg	Glu	Thr	Val	Arg 60	Arg	Val	Ser	Gln
Gln 65	Arg	Gly	Arg	Pro	Gly 70	Arg	Leu	Arg	Arg	Ala 75	Glu	Ala	Gly	Arg	Leu 80
Gly	Trp	Gln	Gly	Val 85	Leu	Ala	Ser	Pro	His 90	Ala	Leu	Leu	Ser	Glu 95	Gly
Ile	Val	Val	Gly 100	His	Thr	Ile	Tyr	Cys 105							
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Ile 1	Val	Ser	Glu	Arg 5	Ser	Leu	Arg	Ser	Leu 10	Trp	Thr	Ala	His	Trp 15	Ala
Leu	Pro	Glu	Met 20	Asp	Ser	Arg	Ile	Pro 25	Tyr	Asp	Asp	Tyr	Pro 30	Val	Val
Phe	Leu	Pro 35	'Ala	Tyr	Glu	Asn	Pro 40	Pro	Ala	Trp	Ile	Pro 45	Pro	His	Glu
7	**- 7	77.5	TT	D	3		3	7	G 1	T	mb	01 -	Dha	T	D

Arg Val His His Pro Asp Tyr Asn Asn Glu Leu Thr Gln Phe Leu Pro

55

60

75

80

50

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Gly

Leu Arg Leu

Arg Thr

Ser

Ser

260

Ser

Gln

265

Pro

His

Gly

Ala

270

Arg

Arg

Val Gln

<210> 477

<211> 256

<212> PRT

<213> homo sapiens

<400> 477

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Cys	Pro	Ala 35	Gly	Pro	Arg	Arg	Pro 40	Gly	Thr	Ser	Thr	Pro 45	Pro	Ser	Ser
Pro	Val 50	Arg	Thr	Cys	Gly	Pro 55	Leu	Thr	Asp	Glu	Asp 60	Val	Val	Arg	Leu
Arg 65	Pro	Cys	Glu	Lys	Lys 70	Arg	Leu	Asp	Ile	Arg 75	Gly	Lys	Leu	Tyr	Leu 80
Ala	Pro	Leu	Thr	Thr 85	Cys	Gly	Asn	Leu	Pro 90	Phe	Arg	Arg	Ile	Cys 95	Lys
Arg	Phe	Gly	Ala 100	Asp	Val	Thr	Суз	Gly 105	Glu	Met	Ala	Val	Cys 110	Thr	Asn
Leu	Leu	Gln 115	Gly	Gln	Met	Ser	Glu 120	Trp	Ala	Leu	Leu	Lys 125	Arg	His	Gln
Cys	Glu 130	Asp	Ile	Phe	Gly	Val 135	Gln	Leu	Glu	Gly	Ala 140	Phe	Pro	Asp	Thr
Met 145	Thr	Lys	Cys	Ala	Glu 150	Leu	Leu	Ser	Arg	Thr 155	Val	Glu	Val	Asp	Phe 160
Val	Asp	Ile	Asn	Val 165	Gly	Cys	Pro	Ile	Asp 170	Leu	Val	Tyr	Lys	Lys 175	Gly
Gly	Gly	Cys	Ala 180	Leu	Met	Asn	Arg	Ser 185	Thr	Lys	Phe	Gln	Gln 190	Ile	Val
Arg	Gly	Met 195	Asn	Gln	Val	Leu	Asp 200	Val	Pro	Leu	Thr	Val 205	Lys	Ile	Arg
Thr	Gly 210	Val	Gln	Glu	Arg	Val 215	Asn	Leu	Ala	His	Arg 220	Leu	Leu	Pro	Glu
Leu 225	Arg	Asp	Trp	Gly	Val 230	Ala	Leu	Val	Thr	Glu 235	Met	Gly	Thr	Ser	Cys 240
His	Leu	Arg	Met	Pro 245	Thr	Ala	Pro	Cys	Arg 250	Leu	Val	Ser	Pro	Gly 255	Ser

<210> 478

<211> 165

<212> PRT

<213> homo sapiens

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Ala	Thr	Cys	Thr 20	Arg	Trp	Pro	Cys	Ala 25	Ser	Ala	Arg	Arg	Arg 30	Gly	Gly
Gly	His	Trp 35	Pro	Lys	Glu	His	Leu 40	Ala	Asp	Ala	Asp	Pro 45	Val	Gly	Cys
Leu	Leu 50	Ala	Gly	His	Gln	Arg 55	Leu	Gln	Val	Val	Ala 60	Ala	Gln	Val	Val
Gly 65	Arg	Pro	Leu	Val	Asp 70	Pro	Leu	Trp	Glu	Pro 75	Leu	Gln	Gln	Pro	His 80
Gly	Ile	Val	Pro	Ala 85	Gln	Glu	Gly	Gln	Pro 90	Leu	Glu	Gln	Lys	Ala 95	Pro
Gly	Leu	Leu	His 100	Ala	Leu	Arg	Val	Arg 105	Ala	Pro	Val	Leu	Gln 110	Ala	Val
Val	Gly	Glu 115	Val	Pro	Gln	Asp	Val 120	Gln	Ala	Leu	Gly	Arg 125	Arg	Asp	Val
Pro	Val 130	Pro	Leu	Leu	Leu	Asp 135	Leu	Arg	Glu	Glu	Pro 140	Arg	Leu	Glu	Gln
Gly 145	Ala	Thr	Gly	Asn	His 150	Asp	Pro	Gly	Asp	Thr 155	Ser	Leu	His	Gly	Ala 160
Val	Gly	Ile	Leu	Lys 165											
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Glu	His	Gly	Asp 20	His	Gly	Ala	Gly	Val 25	Cys	Ser	Asp	His	His 30	His	Arg
Gly	Gly	His 35	Val	Pro	Ala	Glu	Pro 40	Leu	Gln	Ala	Val	Cys 45	Thr	Val	Leu
His	Gln 50	Pro	Ala	Gln	Pro	Gly 55	Ala	Glu	Glu	Arg	Arg 60	Cys	Pro	Val	Leu
Arg 65	Arg	Met	Pro	Val	Ala 70	Ser	Glu	Thr	Gln	Cys 75	Gln	Ala	Thr	Glu	Ser 80
Gln	Ser	Arg	Ser	Leu 85	Thr	Pro	Arg	Leu	Gly 90	Pro	Pro	Thr	Ala	Trp 95	Pro
Cys	Ala	Leu	Arg 100	Pro	Ala	Glu	Arg	Phe 105	Pro	Pro	Leu	Pro	Ala 110	Gln	Cya

Leu	Leu	His 115	Val	Gln	Leu	Gln	Thr 120	Leu	Phe	Val	Pro	Glu 125	His	Gly	Asp
His	Gly 130	Ala	Gly	Val	Cys	Ser 135	Asp	His	His	His	Arg 140	Gly	Gly	His	Val
Pro 145	Ala	Glu	Pro	Leu	Gln .150	Ala	Val	Cys	Thr	Val 155	Leu	His	Gln	Pro	Ala 160
Gln	Pro	Gly	Ala	Glu 165	Glu	Arg	Arg	Cys	Pro 170	Val	Leu	Arg	Arg	Met 175	Pro
Val	Ala	Leu	Gly 180	Glu	His	Ser	Val	Arg 185	Gln	Arg	Asn	Pro	Arg 190	Ala	Ala
Gly	Leu	Arg 195	Pro	Ala	Ser	Ala	His 200	Arg	Pro	Pro	Gly	Arg 205	Ala	Ala	Leu
Arg	Pro 210	Ala	Gly	Ala	Leu	Pro 215	Pro	Leu	Pro	Ala	His 220	Leu	Ser	Val	Pro
Ala 225	Ala	Arg	Asp	Arg	Pro 230	Ala	Ala	His	His	Leu 235	Ala	Val	Arg	Arg	Gly 240
Gly	Ala	Pro	Thr	Leu 245	Pro	Gly	Pro	Leu	Asp 250	Leu	Gln	Gly	Ser	Gly 255	Pro
Arg	Gly	Gly	Val 260	Gly	Asn										
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Leu 145	Leu	Ser	His	Tyr	Lys 150	Leu	Ser	Ala	Arg	Ser 155	Phe	Ile	Ser	Arg	His 160
Ser	Gln	Gly	Arg	Arg 165	Arg	Glu	Asp	Ala	Leu 170	Ser	Ser	Glu	Gly	Cys 175	Leu
Trp	Pro	Ser	Glu 180	Ser	Thr	Val	Ser	Gly 185	Asn	Gly	Ile	Pro	Glu 190	Pro	Gln
Val	Tyr	Ala 195	Pro	Pro	Arg	Pro	Thr 200	Asp	Arg	Leu	Ala	Val 205	Pro	Pro	Phe
Ala	Gln 210	Arg	Glu	Arg	Phe	His 215	Arg	Phe	Gln	Pro	Thr 220	Tyr	Pro	Tyr	Leu
Gln 225	His	Glu	Ile	Asp	Leu 230	Pro	Pro	Thr	Ile	Ser 235	Leu	Ser	Asp	Gly	Glu 240
Glu	Pro	Pro	Pro	Tyr 245	Gln	Gly	Pro	Trp	Thr 250	Phe	Lys	Val	Arg	Asp 255	Pro
·Glu	Glu	Glu	Leu 260	Glu	Ile	Glu	Arg	Gly 265	Leu	Gly	Ala	Glu	Thr 270		
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	PRT homo	sapie	ns												
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Thr Arg Ala Pro Gly Pro Ser Arg Phe Gly Thr Pro Arg Arg

Val Arg Arg Pro

110

105

Trp

120

His Pro

100

Ser Trp Lys Leu Asn Gly Asp

<210> 482

<211> 99

<212> PRT

<213> homo sapiens

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Glu	Lys	Asp	Thr 20	Val	Ser	Ile	Leu	Lys 25	Leu	Leu	Arg	Phe	Ser 30	Glu	Arg
Gly	Arg	His 35	Leu	Asn	Arg	Gln	Val 40	Gly	Phe	Ser	Val	Leu 45	Ser	Ala	Leu
Gly	Ile 50	Trp	Arg	Glu	Met	Gly 55	Leu	Leu	Ser	Leu	60 60	Thr	Gln	Glu	Gly
His 65	Ala	Leu	Lys	Thr	Val 70	Phe	Val	Asp	Gln	Arg 75	Arg	Leu	Tyr	Ser	Thr 80
Gly	Gly	Ile	Gln	Met 85	Ser	Leu	Arg	Gly	Arg 90	Glu	Glu	Thr	Trp	Gln 95	Ala
Asp	Tyr	Ile													
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Phe	Glu	Leu	Cys 20	Phe	Ser	Phe	Phe	Pro 25	Cys	Leu	Phe	Ser	Lys 30	Ile	Tyr
Leu	Asn	Leu 35	Glu	Thr	Gln	Asp	Ile 40	Phe	Leu	Gly	Asn	Leu 45	Leu	Pro	Met
Ser	Glu 50	Val	Ala	Ser	Ala	Ala 55	Ser	Arg	Gln	Ile	Pro 60	Gly	Asn	Pro	Glu
Pro 65	Gln	Asn	Val	Ile	Pro 70	Pro	Gly	Ser	Ala	Trp 75	Pro	Asp	Pro	Val	Leu 80
Ser	Ala	Gly	Phe	Thr 85	Tyr	Gln	Ser	His	Ser 90	Ser	Phe	Ser	Ile	Asn 95	Thr
	Lуs	Ser	Ser 100	Pro	Asn	His	His								
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Val	Leu	Leu	Ser 20	Glu	Cys	His	Leu	Leu 25	Cys	Thr	Gln	Cys	His 30	Asp	Ser
Lys	Ile	Lys 35	Ile	Ser	Val	Ser	Asn 40	Gln	Asn	Ile	Asn	Gln 45	Ala	Arg	Asn

Ser	Trp 50	Ala	Gln	Arg	Gly	Val 55	Arg	Gly	Leu	Ser	Tyr 60	Thr	Ala	Val	Lys
Gln 65	Pro	Thr	Cys	Ser	Ala 70	His	Ser	Gln	Ala	Glu 75	Ser	Asp	Trp	Ser	Cys 80
Arg	Gln	Arg	Gly	Gly 85	Gly	Arg	Val	Leu	Cys 90	Cys	Pro	Leu	Leu	Cys 95	Met
Val	Ser	Trp	Val 100	Phe	Gln	Gly	Gly	Gln 105	Leu	Leu	Ser	Pro	Asn 110	Lys	Thr
Val	Asn	Ser 115	Leu	Arg	Thr	Gly	Pro 120	Leu	Pro	His					
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Gln	Gly	Ser	Gly 20	Leu	Ser	His	His	Pro 25	Ala	Pro	Gln	Ser	Asp 30	Ser	Ala
Pro	Thr	Ser 35	Pro	Pro	Ile	Pro	Gly 40	Glu	Pro	Gly	Pro	Gln 45	Arg	Glu	Val
Asp	Lys 50	Trp	Gly	Gly	Ser	Leu 55	Gly	Arg	Pro	Glu	Ser 60	Ser	Gly	His	Pro
Gly 65	Arg	Thr	Pro	Ala	Thr 70	Cys	Cys	His	Cys	Ala 75	Ala	Val	Met	Ala	Arg 80
Ser	Gly	Ser	Ala	Thr 85	Pro	Pro	Ala	Arg	Ala 90	Pro	Gly	Ala	Pro	Pro 95	Arg
Ser	Pro	Pro	Gln 100	Arg	Leu	Val	Gln	Asp 105	Val	Ser	Gly	Pro	Leu 110	Arg	Glu
Leu	Arg	Pro 115	Arg	Leu	Cys	His	Leu 120	Arg	Lys	Gly	Pro	Gln 125	Gly	Tyr	Gly
Phe	Asn 130	Leu	His	Ser	Asp	Lys 135	Ser	Arg	Pro	Gly	Gln 140	Tyr	Ile	Arg	Ser
Val 145	Asp	Pro	Gly	Ser	Pro 150	Ala	Ala	Arg	Ser	Gly 155	Leu	Arg	Ala	Gln	Asp 160
Arg	Leu	Ile	Glu	Val 165	Asn	Gly	Gln	Asn	Val 170	Glu	Gly	Leu	Arg	His 175	Ala
Glu	Val	Val	Ala 180	Ser	Ile	Lys	Ala	Arg 185	Glu	Asp	Glu	Ala	Arg 190	Leu	Leu
Val	Val	Asp 195	Pro	Glu	Thr	Asp	Glu 200	His	Phe	Lys	Arg	Leu 205	Arg	Val	Thr
Pro	Thr	Glu	Glu	His	Val	Glu	Gly	Pro	Leu	Pro	Ser	Pro	Val	Thr	Asn

Ala	Arg	Gly	Arg 20	Leu	Arg	Pro	Lys	Val 25	Arg	Ala	Gly	Gly	Val 30	Pro	Gly
Ser	Arg	Asp 35	Arg	Gln	Glu	Gly	Ala 40	Gln	Lys	Leu	Leu	Lys 45	Ile	Ser	Arg
Phe	Leu 50	Phe	Gln	Ser	Ile	Cys 55	Gly	Ala	Arg	Leu	Leu 60	Thr	Arg	Met	Ala
Arg 65	Ala	Phe	Ser	Leu	Ala 70	Ser	Ala	Ala	Val	Gly 75	Leu	Arg	Trp	Arg	Pro 80
Leu	Ser	Trp	Lys	Gly 85	Ser	Cys	Phe	Gln	Ala 90	Leu	Pro	Ser	Ser	Val 95	Ser
Leu	Ser	Glu	Pro 100	Gly	Arg	Ser	Leu	Arg 105	Asp	Glu	His	Ala	Glu 110	Pro	Pro
Leu	Ser	Trp 115	Ala	Gly	Leu	Val	Pro 120	Leu	Val	Thr	Gly	Asp 125	Gly	Arg	Gly
Pro	Ser 130	Thr	Cys	Ser	Ser	Val 135	Gly	Val	Thr	Arg	Ser 140	Arg	Leu	Lys	Cys
Ser 145	Ser	Val	Ser	Gly	Ser 150	Thr	Thr	Ser	Ser	Arg 155	Ala	Ser	Ser	Ser	Arg 160
Ala	Leu	Met	Leu	Ala 165	Thr	Thr	Ser	Ala	Trp 170	Arg	Ser	Pro	Ser	Thr 175	Phe
Cys	Pro	Phe	Thr 180	Ser	Met	Ser	Arg	Ser 185	Trp	Ala	Arg	Arg	Pro 190	Glu	Arg
Ala	Ala	Gly 195	Glu	Pro	Gly	Ser	Thr 200	Glu	Arg	Met	Tyr	Trp 205	Pro	Gly	Arg
Asp	Leu 210	Ser	Leu	Cys	Arg	Leu 215	Asn	Pro							
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Pro	Gly	Glu	Gly 20	Leu	Gly	Arg	Cys	Ser 25	His	Ala	Leu.	Ile	Arg 30	Gly	Val
Pro	Glu	Ser 35	Leu	Ala	Ser	Gly	Glu 40	Gly	Ala	Gly	Ala	Gly 45	Leu	Pro	Ala
Leu	Asp 50	Leu	Ala	Lys	Ala	Gln 55	Arg	Glu	His	Gly	Val 60	Leu	Gly	Gly	Lys
Leu 65	Arg	Gln	Arg	Leu	Gly 70	Leu	Gln	Leu	Leu	Glu 75	Leu	Pro	Pro	Glu	Glu 80

Ser Leu Pro Leu Gly Pro Leu Leu Gly Asp Thr Ala Val Ile Gln Gly

Asp	Thr	Ala	Leu 100	Ile	Thr	Arg	Pro	Trp 105	Ser	Pro	Ala	Arg	Arg 110	Pro	Glu
Val	Asp	Gly 115	Val	Arg	Lys	Ala	Leu 120	Gln	Asp	Leu	Gly	Leu 125	Arg	Ile	Val
Glu	Ile 130	Gly	Asp	Glu	Asn	Ala 135	Thr	Leu	Asp	Gly	Thr 140	Asp	Val	Leu	Phe
Thr 145	Gly	Arg	Glu	Phe	Phe 150	Val	Gly	Leu	Ser	Lys 155	Trp	Thr	Asn	His	Arg 160
Gly	Ala	Glu	Ile	Val 165	Ala	Asp	Thr	Phe	Arg 170	Asp	Phe	Ala	Val	Ser 175	Thr
Val	Pro	Val	Ser 180	Gly	Pro	Ser	His	Leu 185	Arg	Gly	Leu	Сув	Gly 190	Met	Gly
Gly	Pro	Arg 195	Thr	Val	Val	Ala	Gly 200	Ser	Ser	Asp	Ala	Ala 205	Gln	Lys	Ala
Val	Arg 210	Ala	Met	Ala	Val	Leu 215	Thr	Asp	His	Pro	Tyr 220	Ala	Ser	Leu	Thr
Leu 225	Pro	Asp	Asp	Ala	Ala 230	Ala	Asp	Cys	Leu	Phe 235	Leu	Arg	Pro	Gly	Leu 240
Pro	Gly	Val	Pro	Pro 245	Phe	Leu	Leu	His	Arg 250	Gly	Gly	Gly	Asp	Leu 255	Pro
Asn	Ser	Gln	Glu 260	Ala	Leu	Gln	Lys	Leu 265	Ser	Asp	Val	Thr	Leu 270	Val	Pro
Val ·	Ser	Cys 275	Ser	Glu	Leu	Glu	Lys 280	Ala	Gly	Ala	Gly	Leu 285	Ser	Ser	Leu
Cys	Leu 290	Val	Leu	Ser	Thr	Arg 295	Pro	His	Ser						

<210> 489 <211> 175 <212> PRT <213> homo sapiens

<400> 489

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His	Thr	Arg 35	Gln	Pro	Arg	Thr	Lys 40	Lys	Glu	Thr	Val	Ser 45	Ser	Cys	Val
Ile	Trp 50	Glu	Gly	Gln	Gly	Gly 55	Ile	Trp	Val	Ile	Cys 60	Gln	His	Cys	His
Cys 65	Pro	Asp	Ser	Leu	Leu 70	Gly	Ser	Val	Ala	Ala 75	Ala	Cys	His	Asn	Ser 80

Ala	Arg	Ser	Pro	His 85	Ala	Ala	Glu	Thr	Ala 90	Gln	Val	Gly	Gly	Thr 95	Arg
Asp	Trp	His	Ser 100	Gly	Asp	Gly	Glu	Val 105	Pro	Glu	Arg	Val	Arg 110	His	Asp
Leu	Ser	Ser 115	Ser	Val	Ile	Gly	Pro 120	Phe	Gly	Glu	Ala	Tyr 125	Glu	Lys	Leu
Pro	Ala 130	Gly	Glu	Glu	Asn	Val 135	Ser	Ala	Ile	Gln	Arg 140	Arg	Val	Leu	Val
Ser 145	Tyr	Phe	His	Asn	Ser 150	Glu	Pro	Gln	Val	Leu 155	Gln	Gly	Phe	Ala	Asp 160
Ser	Ile	Asp	Leu	Trp 165	Pro	Thr	Ser	Gly	Ala 170	Pro	Gly	Pro	Arg	Asp 175	
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Pro	Ala	Ala	Met 20	Thr	Pro	Gln	Val	Ala 25	Val	Leu	Ala	Ala	Val 30	Ala	Pro
Val	Val	Ala 35	Ser	Val	Tyr	Leu	Pro 40	Ala	Pro	Arg	Ala	Pro 45	Phe	Glu	Leu
Trp	Pro 50	Asp	Pro	Glu	Arg	Glu 55	Gly	Gln	Pro	Pro	His 60	Leu	Pro	Pro	Thr
Pro 65	Gly	Ser	Leu	Gly	Leu 70	Pro	Gly	Ser	Gly	His 75	Gly	Ser	Ser	Gly	Pro 80
Ala	Pro	Pro	Pro	Ala 85	Ser	Pro	Ser	His	Pro 90	His	Arg	Leu	Pro	Leu 95	Gln
Pro	Leu	Gly	Phe 100	Leu	Ser	Phe	Leu	Val 105	Ser	Ser	Pro	Val	Ser 110	Ser	Gly
His	Pro	His 115	Ser	Cys	Arg	Ala	Val 120	Ile	Ser	Ala	Gly	Ala 125	Pro	Pro	Pro
Glu	Asp 130	Arg	Val	Gly	Gly	Glu 135	Gly	Ser	Pro	Arg	Leu 140	Gln	Ala	Ser	Gly
Thr 145	Gly	Ser	Ser	Gly	Phe 150										
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Phe	Val	Lys	Arg	Thr	Lys	Gln	Pro	Arg	Gln	Thr	Leu	Asp	Ala	Pro	Cys

<213> homo sapiens

1 5 10 15 Trp Gly Arg Cys Leu Leu Gly Glu Ala Val Ala Ala Leu Arg Leu 20 25 30 Gly Gly Gly Ala Pro Asp Gln Val His Cys Glu Val Ser Ala Gly Ile 40 45 35 Ser Val His Leu Ala Gly Cys Leu Val Tyr Ser Asp Ile Ala Phe Ser 55 50 60 Cys Gly Cys Gln Arg Gly Val Ser Cys His Ser Trp His Glu Asn Leu 70 75 80 65 Cys Gly Ser Phe Ile Phe Phe Phe Lys 85 <210> 492 <211> 63 <212> PRT <213> homo sapiens <400> 492 Thr Leu Phe Glu Lys Cys Leu Leu Pro Ser Leu Gly Leu Leu His Leu 1 10 Val Ile Thr Lys Phe Asp His Asp His Ile Val Ser Gln Ser Ala Leu 20 25 Gly Gly Trp Thr Ile Val His Glu Val Ala Val Ser Glu Ser Leu Met 35 40 45 Cys Thr Phe Gln Thr Phe Leu Lys Leu Tyr Gln Ser Tyr Leu Lys 55 60 <210> 493 <211> 73 <212> PRT <213> homo sapiens <400> 493 Ile Gln Lys Ser Arg Met Leu Cys His Tyr Gln Asp Asn 10 Asn Gly Cys Pro Leu Gln Ser Gln Gln Val Gln Pro His Ser 20 25 30 Pro Glu Leu Pro Lys Gly Ile Phe Pro Thr Ala Arg Leu Gln Pro 35 40 45 Ser Thr Pro Ser Glu His Gln Gly Phe Val Ser Val Val Leu Phe Lys 50 55 60 Leu Gln Thr Ile Ile Tyr Asp Ser 65 70 <210> 494 <211> 318 <212> PRT

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Ile	Ala	Ile	Ser 20	Glu	Glu	Asp	Thr	Leu 25	Ser	Gly	Val	Ile	Ile 30	Lys	Ser
Leu	Thr	Glu 35	His	Gly	Val	Ala	Ala 40	Thr	Asp	Gly	Arg	Leu 45	Lys	Val	Gly
Asp	Gln 50	Ile	Leu	Ala	Val	Asp 55	Asp	Glu	Ile	Val	Val 60	Gly	Tyr	Pro	Ile
Glu 65	Lys	Phe	Ile	Ser	Leu 70	Leu	Lys	Thr	Ala	Lys 75	Met	Thr	Val	Lys	Leu 80
Thr	Ile	His	Ala	Glu 85	Asn	Pro	Asp	Ser	Gln 90	Ala	Val	Pro	Ser	Ala 95	Ala
Gly	Ala	Ala	Ser 100	Gly	Glu	Lys	Lys	Asn 105	Ser	Ser	Gln	Ser	Leu 110	Met	Val
Pro	Gln	Ser 115	Gly	Ser	Pro	Glu	Pro 120	Glu	Ser	Ile	Arg	Asn 125	Thr	Ser	Arg
Ser	Ser 130	Thr	Pro	Ala	Ile	Phe 135	Ala	Ser	Asp	Pro	Ala 140	Thr	Cys	Pro	Ile
Ile 145	Pro	Gly	Cys	Glu	Thr 150	Thr	Ile	Glu	Ile	Ser 155	Lys	Gly	Arg	Thr	Gly 160
Leu	Gly	Leu	Ser	Ile 165	Val	Gly	Gly	Ser	Asp 170	Thr	Leu	Leu	Gly	Ala 175	Ile
Ile	Ile	His	Glu 180	Val	Tyr	Glu	Glu	Gly 185	Ala	Ala	Cys	Lys	Asp 190	Gly	Arg
Leu	Trp	Ala 195	Gly	Asp	Gln	Ile	Leu 200	Glu	Val	Asn	Gly	Ile 205	Asp	Leu	Arg
Lys	Ala 210	Thr	His	Asp	Glu	Ala 215	Ile	Asn	Val	Leu	Arg 220	Gln	Thr	Pro	Gln
Arg 225	Val	Arg	Leu	Thr	Leu 230	Tyr	Arg	Asp	Glu	Ala 235	Pro	Tyr	Lys	Glu	Glu 240
Glu	Val	Cys	Asp	Thr 245	Leu	Thr	Ile	Glu	Leu 250	Gln	Lys	Lys	Pro	Gly 255	Lys
Gly	Leu	Gly	Leu 260	Ser	Ile	Val	Gly	Lys 265	Arg	Asn	Asp	Thr	Gly 270	Val	Phe
Val	Ser	Asp 275	Ile	Val	Lys	Gly	Gly 280	Ile	Ala	Asp	Ala	Asp 285	Gly	Arg	Leu
Met	Gln 290	Gly	Asp	Gln	Ile	Leu 295	Met	Val	Asn	Gly	Glu 300	Asp	Val	Arg	Asn
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<211> 206 <212> PRT

<213> homo sapiens

<400> 495

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Lys	Ile	Ser	Gln 20	Asp	Val	Asp	Lys	Glu 25	Asp	Glu	Phe	Gly	Tyr 30	Ser	Trp
Lys	Asn	Ile 35	Arg	Glu	Arg	Tyr	Gly 40	Thr	Leu	Thr	Gly	Glu 45	Leu	His	Met
Ile	Glu 50	Leu	Glu	Lys	Gly	His 55	Ser	Gly	Leu	Gly	Leu 60	Ser	Leu	Ala	Gly
Asn 65	Lys	Asp	Arg	Ser	Arg 70	Met	Ser	Val	Phe	Ile 75	Val	Gly	Ile	Asp	Pro 80
Asn	Gly	Ala	Ala	Gly 85	Lys	Asp	Gly	Arg	Leu 90	Gln	Ile	Ala	Asp	Glu 95	Leu
Leu	Glu	Ile	Asn 100	Gly	Gln	Ile	Leu	Tyr 105	Gly	Arg	Ser	His	Gln 110	Asn	Ala
Ser	Ser	Ile 115	Ile	Lys	Cys	Ala	Pro 120	Ser	Lys	Val	Lys	Ile 125	Ile	Phe	Ile
Arg	Asn 130	Lys	Asp	Ala	Val	Asn 135	Gln	Met	Ala	Val	Cys 140	Pro	Gly	Asn	Ala
Val 145	Glu	Pro	Leu	Pro	Ser 150	Asn	Ser	Glu	Asn	Leu 155	Gln	Asn	Lys	Glu	Thr 160
Glu	Pro	Thr	Val	Thr 165	Thr	Ser	Asp	Ala	Ala 170	Val	Asp	Leu	Ser	Ser 175	Phe
Lys	Asn	Val	Gln 180	His	Ser	Gly	Ala	Ser 185	Gln	Gly	Gly	Arg	Gly 190	Val	Trp
Val	Leu	Leu 195	Ser	Ala	Lys	Lys	Ile 200	His	Ser	Val	Glu	Ser 205	Ser		

<210> 496

<400> 496

Thr 1	Ser	Trp	Ile	Ile 5	Met	Ala	Pro	Ser	Ser 10	Val	Ser	Glu	Pro	Pro 15	Thr
Met	Leu	Arg	Pro 20	Ser	Pro	Val	Arg	Pro 25	Leu	Glu	Ile	Ser	Met 30	Val	Val
Ser	Gln	Pro 35	Gly	Ile	Met	Gly	Gln 40	Val	Ala	Gly	Ser	Glu 45	Ala	Lys	Ile
Ala	Gly 50	Val	Asp	Asp	Leu	Leu 55	Val	Phe	Arg	Met	Asp 60	Ser	Gly	Ser	Gly

<211> 119

<212> PRT

<213> homo sapiens

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Pro	Leu	Ala	Ala	Pro 85	Ala	Ala	Glu	Gly	Thr 90	Ala	Trp	Glu	Ser	Gly 95	Phe
Ser	Ala	Trp	Met 100	Val	Ser	Phe	Thr	Val 105	Ile	Phe	Ala	Val	Phe 110	Arg	Arg
Leu	Ile	Asn 115	Phe	Ser	Ile	Gly									
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Ser	Leu	Ile	Met 20	Phe	Met	Ser	Gly	Gly 25	Ser	Ser	Arg	Ser	Thr 30	Leu	Arg
Arg	Met	Val 35	Pro	Thr	Pro	Ser	Thr 40	Thr	Ser	Leu	Ser	Pro 45	Arg	Ser	Ser
Ser	Ser 50	Thr	Ser	Lys	Leu	Leu 55	Thr	Gln	Ser	Gly	Pro 60	Ser	Leu	Pro	Gln
Pro 65	Pro	Ala	Ser	Arg	Pro 70	Phe									
	498 139 PRT			Arg		Phe									
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<pre></pre>	498 139 PRT homo 498 Arg	sapie Ser Ile Val	ns Pro Cys 20 Ser	Ala 5 Ser	70 Cys Ile	Gly	Asn Tyr	Glu 25 Glu	10 Val	Pro	Glu	His Ile	Pro 30	15 Cys	Val
<pre></pre>	498 139 PRT homo 498 Arg Leu Pro	sapie Ser Ile Val 35	ns Pro Cys 20 Ser Asn	Ala 5 Ser Asn	70 Cys Ile	Gly Ser Val	Asn Tyr 40 Pro	Glu 25 Glu	Val Arg Asn	Pro Arg	Glu Leu Gln	His Ile 45 Pro	Pro 30 Glu	Cys Lys Ser	Val Tyr
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Gln	Pro	Ala 115	Lys	Ser	Cys	His	Thr 120	Leu	Cys	Thr	Ser	Thr 125	Met	Pro	Pro
Ala	Val 130	Ser	Leu	Pro	Val	Ser 135	Pro	Arg	Lys	Leu					
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Cys	Phe	Leu	Phe 20	Leu	Met	Lys	Leu	Asp 25	His	Сув	Leu	Gln	Asn 30	Pro	Ala
Gln	Ala	Leu 35	Leu	Pro	Ile	Pro	Phe 40	Thr	Val	Ser	Leu	Val 45	Arg	Arg	Ala
Met	Thr 50	Arg	Gln	Ala	Ala	Ser 55	Cys	Trp	Tyr	Arg	Ala 60	Cys	Asp	Ser	Ser
Trp 65	Arg	Val	Val	_	Ser 70	Ser	Gly	Ala	Glu						
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Phe 1	Ser	Phe	Phe	Asn 5	Glu	Thr	Arg	Ser	Leu 10	Leu	Thr	Lys	Pro	Cys 15	Thr
Ser	Pro	Pro	Ala 20	His	Pro	Leu	His	Ser 25	Ser	Leu	Gly	Ser	Ala 30	Ser	Pro
Val	Ser	Gln 35	Glu	Leu	Gln	Gln	Asn 40	Gly	Cys	Gly	Thr	Ala 45	Thr	Thr	Thr
Ser	Ile 50	Glu	Arg	Gln	Glu	Gly 55	Arg	Gly	Ala	Val	Gly 60	Leu	Val	Gln	Gly
Phe 65	Phe	Ile	Val	Phe	Phe 70	Phe									
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<211><212><213><400>	284 PRT homo			Leu 5	Ala	Thr	Arg	Thr	Arg 10	Ser	Gly	Ala	Ala	Ala 15	His

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Val	Lys	Glu 35	Asn	Ala	Arg	Ser	Pro 40	Ser	Ser	Val	Thr	Gly 45	Asn	Ala	Leu
Trp	Lys 50	Ala	Met	Glu	Lys	Ser 55	Ser	Leu	Thr	Gln	His 60	Ser	Trp	Gln	Ser
Leu 65	Lys	Asp	Arg	Tyr	Leu 70	Lys	His	Leu	Arg	Gly 75	Gln	Glu	His	Lys	Tyr 80
Leu	Leu	Gly	Asp	Ala 85	Pro	Val	Ser	Pro	Ser 90	Ser	Gln	Lys	Leu	Lys 95	Arg
Lys	Ala	Glu	Glu 100	Asp	Pro	Glu	Ala	Ala 105	Asp	Ser	Gly	Glu	Pro 110	Gln	Asn
Lys	Arg	Thr 115	Pro	Asp	Leu	Pro	Glu 120	Glu	Glu	Tyr	Val	Lys 125	Glu	Glu	Ile
Gln	Glu 130	Asn	Glu	Glu	Ala	Val 135	Lys	Lys	Met	Leu	Val 140	Glu	Ala	Thr	Arg
Glu 145	Phe	Glu	Glu	Val	Val 150	Val	Asp	Glu	Ser	Pro 155	Pro	Asp	Phe	Glu	Ile 160
His	Ile	Thr	Met	Cys 165	Asp	Asp	Asp	Pro	Pro 170	Thr	Pro	Glu	Glu	Asp 175	Ser
Glu	Thr	Gln	Pro 180	Asp	Glu	Glu	Glu	Glu 185	Glu	Glu	Glu	Glu	Lys 190	Val	Ser
Gln	Pro	Glu 195	Val	Gly	Ala	Ala	Ile 200	Lys	Ile	Ile	Arg	Gln 205	Leu	Met	Glu
Lys	Phe 210	Asn	Leu	Asp	Leu	Ser 215	Thr	Val	Thr	Gln	Ala 220	Phe	Leu	Lys	Asn
Ser 225	Gly	Glu	Leu	Glu	Ala 230	Thr	Ser	Ala	Phe	Leu 235	Ala	Ser	Gly	Gln	Arg 240
Ala	Asp	Gly	Tyr	Pro 245	Ile	Trp	Ser	Arg	Gln 250	Asp	Asp	Ile	Asp	Leu 255	Gln
Lys	Asp	Asp	Glu 260	Asp	Thr	Arg	Glu	Ala 265	Leu	Val	Lys	Lys	Phe 270	Gly	Ala
Gln	Asn	Val 275	Ala	Arg	Arg	Ile	Glu 280	Phe	Arg	Lys	Lys				
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Glu	Ser	Ser	Ser 20	GIA	Val	GIA	Gly	Ser 25	ser	Ser	His	Ile	Val 30	Ile	Cys
Ile	Ser	Lys 35	Ser	Gly	Gly	Leu	Ser 40	Ser	Thr	Thr	Thr	Ser 45	Ser	Asn	Ser

Arg	Val 50	Ala	Ser	Thr	Ser	Ile 55	Phe	Leu	Thr	Ala	Ser 60	Ser	Phe	Ser	Trp
Ile 65	Ser	Ser	Phe	Thr	Tyr 70	Ser	Ser	Ser	Gly	Lys 75	Ser	Gly	Val	Leu	Leu 80
Phe	Cys	Gly	Ser	Pro 85	Leu	Ser	Ala	Ala	Ser 90	Gly	Ser	Ser	Ser	Ala 95	Phe
Arg	Leu	Ser	Phe 100	Trp	Glu	Glu	Gly	Leu 105	Thr	Gly	Ala	Ser	Pro 110	Ser	Arg
Tyr	Leu	Cys 115	Ser	Trp	Pro	Arg	Arg 120	Cys	Leu	Arg					
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Phe	Lys	Ile	Arg 20	Arg	Ala	Leu	Ile	His 25	His	Asn	Leu	Leu	Lys 30	Leu	Pro
Gly	Gly	Phe 35	His	Lys	His	Leu	Phe 40	Asp	Cys	Phe	Phe	Ile 45	Leu	Leu	Asp
Phe	Phe 50	Leu	His	Ile	Leu	Phe 55	Phe	Arg	Gln	Ile	Trp 60	Ser	Ser	Leu	Ile
Leu 65	Trp	Phe	Pro	Ala	Ile 70	Arg	Gly	Leu	Arg	Val 75	Leu	Leu	Arg	Leu	Pro 80
Leu	Glu	Leu	Leu	Gly 85	Gly	Gly	Ala	His	Arg 90	Arg	Val	Pro	Gln	Gln 95	Val
Leu	Met	Leu	Leu 100	Ala	Pro	Gln	Val	Leu 105	Glu	Val	Ala	Val	Leu 110	Gln	Gly
Leu	Pro	Arg 115	Val	Leu	Arg	Glu	Arg 120	Ala	Leu	Leu	His	Arg 125	Phe	Pro	Gln
Gly	Val 130	Thr	Gly	Asp	Gly	Ala 135	Gly	Arg	Ala	Gly	Ile 140	Phe	Leu	His	Val
Gly 145	Lys	Asp	Gly	Tyr	Val 150	Val	Arg	Ile	Arg	Glu 155	Ala	Ile	Ala	Arg	Val 160
Arg	Cys	Arg	Ser	Ala 165	Pro	Arg	Ala	Arg	Arg 170	Gln	Ala	Pro	Gly	Phe 175	

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Cys 1	Pro	Pro	Glu	Lys 5	Ser	Leu	Gln	Met	Phe 10	Gln	Pro	Leu	Ser	Ser 15	Pro
Asp	Ser	His	Arg 20	Lys	Gly	Thr	Gly	Phe 25	Gly	Leu	Gly	Ile	Val 30	Phe	Ser
Leu	Thr	Phe 35	Phe	Lys	Arg	Arg	Met 40	Trp	Pro	Leu	Ala	Phe 45	Gly	Ser	Gly
Met	Gly 50	Leu	Gly	Met	Ala	Tyr 55	Ser	Asn	Cys	Gln	His 60	Asp	Phe	Gln	Ala
Pro 65	Tyr	Leu	Leu	His	Gly 70	Lys	Tyr	Val	Lys	Glu 75	Gln	Glu	Gln		
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Glu	His	Leu	Gln 20	Gly	Phe	Leu	Gly	Trp 25	Thr	Ser	Ile	Thr	Arg 30	Ile	Leu
Ser	Ser	Arg 35	Pro	His	Pro	Pro	Asp 40	Thr	Gly	Pro	Thr	Ser 45	Cys	Arg	Ala
Pro	Thr 50	Gln	Thr	Cys	Ser	Pro 55	Pro	Ala	Pro	Pro	Ala 60	Phe	Leu	Ser	Ala
Gly 65	Pro	Arg	Ala	Pro	Thr 70	Pro	Glu	Ser	Leu	Ala 75	Arg	Ala	Gly	Asn	Lys 80
Ser	Gln	Val	Arg	Lys 85	Ala	Gly	Ala	Asp	Ala 90	Pro	Asp	Ile	Ala	Arg 95	
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Leu	Leu	Lys	Lys 20	Val	Ser	Glu	Lys	Thr 25	Ile	Pro	Asn	Pro-	Lys 30	Pro	Val
Pro	Phe	Leu 35	Trp	Leu	Ser	Gly	Leu 40	Asp	Arg	Gly	Trp	Asn 45	Ile	Cys	Arg
Asp	Phe 50	Ser	Gly	Gly	His	Gln 55	Leu	Pro	Gly	Phe	Tyr 60	Leu	His	Asp	Arg
Ile 65	Arg	Gln	Thr	Pro	Val 70	Pro	Leu	Pro	Ala	Glu 75	Leu	Arg	Leu	Arg	His 80
Val	Pro	His	Pro	Arg	Leu	Gln	Leu	Ser	Ser	Arg	Pro	Ala	Pro	Ala	Leu

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Ala	Ala	Leu	Ser 20	Thr	Arg	Val	Ser	Leu 25	Tyr	Ser	Thr	Tyr	Met 30	Phe	Thr
Pro	His	Thr 35	Cys	Val	Asp	Glu	His 40	Gln	Ile	Thr	His	Pro 45	Ser	Ser	Thr
Thr	Gly 50	Thr	Pro	Ala	Asp	Tyr 55	Pro	Gln	Ala	Ala	His 60	Ser	Gly	Arg	Ala
Leu 65	Leu	Gly	Ala	Pro	Arg 70	Gly	Gly	Ala	Arg	Gly 75	His	Leu	Gln	His	Cys 80
His	Gln	Ala	Ala	Ser 85	Pro	Glu	Phe	Leu	Gly 90	Asn	Thr	Val	Leu	Gly 95	Lys
Pro	Lys	Val	Arg 100	Ala	Val	Leu	Pro	Arg 105	Gly	Arg	Val	Leu	Pro 110	Gly	Cys
Gly	Gly	Pro 115	Ala	Ala	Asp	Thr	Gly 120	Pro	Arg	Val	Glu	Gly 125	Pro	Gly	Arg
Pro	Ala 130	Ser	Lys	His	Ala	Arg 135	Arg	Ser	Leu	Gly	Glu 140	Pro	Gly	Ser	Val
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Asn Arg Pro Arg Asn Gly Ile Met Met Thr Met Arg Thr Ser Ile Leu

	50					55					60				
Ser 65	Ser	Ser	His	Cys	Val 70	Tyr	Tyr	Val	Phe	Ser 75	Phe	Asn	Lys	Ala	Phe 80
Val	Pro	Met	Ala	Leu 85	Glu	Leu	Gly	Gly	Arg 90	Leu	Lys	Glu	Cys	Val 95	Val
Ile	Leu	Ser	Lys 100	Met											
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Lys	Thr	Asn	Ser 20	Leu	Pro	Leu	Arg	Phe 25	Trp	Val	Asn	Ile	Leu 30	Lys	Asn
Pro	Gln	Phe 35	Val	Phe	Asp	Ile	Asp 40	Lys	Thr	Asp	His	Ile 45	Asp	Ala	Cys
Leu	Ser 50	Val	Ile	Ala	Gln	Ala 55	Phe	Ile	Asp	Ala	Cys 60	Ser	Ile	Ser	Asp
Leu 65	Gln	Leu	Gly	Lys	Asp 70	Ser	Pro	Thr	Asn	Lys 75	Leu	Leu	Tyr	Ala	Lys
Glu	Ile	Pro	Glu	Tyr 85	Arg	Lys	Ile	Val	Gln 90	Arg	Tyr	Tyr	Lys	Gln 95	Ile
Gln	Asp	Met	Thr 100	Pro	Leu	Ser	Glu	Gln 105	Glu	Met	Asn	Ala	His 110	Leu	Ala
Glu	Glu	Ser 115	Arg	Lys	Tyr	Gln	Asn 120	Glu	Phe	Asn	Thr	Asn 125	Val	Ala	Met
Ala	Glu 130	Ile	Tyr	Lys	Tyr	Ala 135	Lys	Arg	Tyr	Arg	Pro 140	Gln	Ile	Met	Ala
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Pro	Ser	Leu	Gly 180	Ala	Asp	Pro	His	Met 185	Val	Pro	Ala	Cys	Ser 190	Ser	Ser
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Glu	Thr 50	Cys	Glu	Gly	Glu	Asp 55	Thr	Glu	Lys	Pro	Val 60	Ile	Cys	Lys	His
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Ser	Pro	Lys 35	Lys	Thr	Ser	Cys	Arg 40	Ala	Glu	Leu	Leu	Val 45	Gln	Ala	Pro
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Ser	Leu	Cys 35	Gly	Asp	Thr	Val	Pro 40	Phe	Arg	Gly	Pro	Ser 45	Gln	Pro	Trp
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Gly 145	Gln	Ala	Arg	Ala	Leu 150	Leu	Pro	Ser	His	Ala 155	Arg	Cys	Cys	Gln	Arg 160
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Ala	Val 50	Thr	Pro	Tyr	Asp	Arg 55	Arg	Asp	Leu	Asp	Ser 60	Arg	Asn	Ser	Pro
Gln 65	Ala	Pro	Ala	Gly	Gln 70	Ser	Thr	Thr	Ser	Ser 75	Ser	Phe	Cys	Phe	Cys 80
Asp	Gly	Leu	Glu	Ser 85	Arg	Gly	Leu	Lys	His 90	Thr	Val	Ser	Ile	Asp 95	Cys
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His	Gln	Val	Gln 20	Gly	Ile	Trp	Leu	Lys 25	Ala	Cys	Ile	Phe	Pro 30	Gly	His
Lys	Leu	Pro 35	Glu	Pro	Leu	Lys	Trp 40	Glu	Ala	Arg	Gln	Phe 45	Gln	Thr	Asn
Leu	Phe 50	Ser	Thr	His	His	Ser 55	Thr	Phe	Lys	Val	Cys 60	Leu	Leu	Leu	Leu
Pro 65	Val	His	Pro	Pro	Ser 70	Leu	Gln	Phe	Phe	His 75	Ser	Leu	Thr	Ser	Glu 80
Arg	Val	Pro	Gly	Gly 85	Ser	Met	Val	Asn	Lys 90	Leu	Thr	Cys	Met	Leu 95	Gln
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1	Ser Arg		•	5		Cys Arg		Ser Trp 25	10		Leu Ala		Leu Leu 30	15	Arg Pro
His			Arg 20	5 Arg	Lys		Lys	Trp 25	10 Trp	Ile		Gln	Leu 30	15	Pro
His	Arg	Ser Cys	Arg 20 Tyr	5 Arg	Lys Cys	Arg	Lys Asp 40	Trp 25	10 Trp Cys	Ile	Ala His	Gln Arg 45	Leu 30 Ala	15 Glu	Pro
His Gly	Arg Asp Pro 50	Ser Cys 35	Arg 20 Tyr	5 Arg Asp Leu	Lys Cys Ser	Arg Leu Leu 55	Lys Asp 40	Trp 25 Leu Cys	Trp Cys Gly	Ile Gly Gly	Ala His Thr	Gln Arg 45	Leu 30 Ala Cys	15 Glu Ser	Pro
His Gly Pro Pro 65	Arg Asp Pro 50 Gly	Ser Cys 35 Gln	Arg 20 Tyr Thr	5 Arg Asp Leu	Lys Cys Ser Pro	Arg Leu Leu 55	Lys Asp 40 Glu	Trp 25 Leu Cys	Trp Cys Gly Pro	Ile Gly Gly Cys	Ala His Thr 60 Pro	Gln Arg 45 Gln Pro	Leu 30 Ala Cys	15 Glu Ser Arg	Pro Gln Phe
His Gly Pro Pro 65	Arg Asp Pro 50 Gly	Ser Cys 35 Gln	Arg 20 Tyr Thr	Arg Asp Leu Ser Tyr 85	Lys Cys Ser Pro 70	Arg Leu Leu 55	Lys Asp 40 Glu Pro	Trp 25 Leu Cys	Trp Cys Gly Pro Val 90	Ile Gly Gly Cys 75	Ala His Thr 60 Pro	Gln Arg 45 Gln Pro	Leu 30 Ala Cys Ser	15 Glu Ser Arg Ser	Pro Gln Phe Ser 80 Leu
His Gly Pro Pro 65	Arg Asp Pro 50 Gly Leu	Ser Cys 35 Gln Gly Leu	Arg 20 Tyr Thr Leu Phe	Arg Asp Leu Ser Tyr 85	Lys Cys Ser Pro 70 Arg	Arg Leu 55 Arg	Lys Asp 40 Glu Pro Phe	Trp 25 Leu Cys Ser Leu	Trp Cys Gly Pro Val 90	Ile Gly Gly Cys 75 Ser	Ala His Thr 60 Pro	Gln Arg 45 Gln Pro	Leu 30 Ala Cys Ser Gly Ser 110	15 Glu Ser Arg Ser Leu 95	Pro Gln Phe Ser 80 Leu Leu

Ser 145	Pro	Tyr	Arg	Ser	Arg 150	Phe	Ser	Arg	Lys	Val 155	Gly	Ser	Gly	Thr	Ser 160
Gly	Gly	Glu	Lys	Ser 165	Arg	Ser	Glu	Ala	Met 170	Ala	Gln	Val	Ala	Cys 175	Cys
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Gly	Cys	Gln	Ile 20	Ser	Leu	Arg	Asn	Gly 25	His	Phe	Leu	Arg	Cys 30	Phe	Phe
Leu	Thr	Glu 35	Ser	Val	Asp	Lys	Leu 40	Ile	Lys	Arg	Leu	Ser 45	His	Phe	Lys
Ile	Thr 50	Pro	Lys	Ser	Ser	Ser 55	Thr	Val	Phe	Phe	Phe 60	Phe	Ser	Phe	Cys
Phe 65	Lys	Ile	Thr	Asn	Gln 70	Val	Arg	Ser	Pro	Thr 75	Ser	Ser	Ser	Met	Asn 80
Ser	Phe	Val	Thr	Glu 85	Leu	Leu	Ser	Val	Cys 90	Ser	Pro	His	Cys	Ala 95	Leu
Asn	Thr	Val	Ser 100	Ala	Ala	Pro	Val	Cys 105	Pro	Leu	Phe	Arg	Lys 110	Glu	Ser
Ile	Phe	Asn 115	Thr	Phe	Thr	Ile	Cys 120	Thr	Pro	Trp	Asn	Leu 125	His	Met	Leu
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Leu	Ile	Lys	Leu 20	Phe	Thr	Glu	His	Val 25	Ala	Glu	Lys	His	Ile 30	Tyr	Gly
T	Mak	Dwe	T	T	T	03.	77-	01 -	0	mb	D	Dh.a	a 1	77-7	m1

Leu Met Pro Leu Leu Glu Ala Gln Ser Thr Pro Phe Gln Val Thr

40

Val

Thr

Lys

Leu

Gly

Phe

Leu

Ser

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Thr

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Leu

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Pro

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Glu

Glu

Lys

170

Phe

Glu

Met

155

Ala Ser

Gly

Gln

Gln

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Phe

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Asn

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ome may n	Leu 65	Cys	Cys	Ala	Asp	Val 70	Ala	Val	Gly	Gly	Gln 75	Val	Arg	Gly	Ser	Ala 80
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	Arg	Asn	Cys 35	Ile	Tyr	Trp	Pro	Leu 40	Pro	Glu	Gln	Gln	Ala 45	Ala	Met	Pro
	Ala	Pro 50	Trp				55	Asp		_	_	Ala 60			Leu	Thr
	Leu 65	Met	Arg			70	_	_	Ser		75			Ile	His	80
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Ser	Trp	Leu 35	Gly	Ser	Ser	Pro	Ile 40	Trp	His	Asp	His	Ile 45	Lys	Arg	Thr
Pro	Ser 50	Asp	Met	Ile	Ser	Ser 55	Lys	Lys	Val	Pro	Ser 60	Leu	Leu	Pro	Asp
His 65	Gln	Arg	Pro	His	Gln 70	His	Asn	Thr	Thr	Leu 75	Arg	Ile	Gln	Ile	His 80
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Cys	Ala	Trp	Gly 20	Gly	Cys	Ala	Pro	Gly 25	Ala	Arg	Gly	Cys	Trp 30	Gly	Pro
Gly	Pro	Pro 35	Ser	Leu	Gly	Val	Gly 40	Arg	Lys	Pro	Gly	Cys 45	Arg	Val	Ser
Ala	Ser 50	Ser	Val	Pro	Glu	Arg 55	Trp	Ile	Ala	Trp	Ser 60	Pro	Arg	Pro	Ser
Glu 65	Ala	Ser	Ala	Thr	Phe 70	Arg	Gly	Ala	Pro	Lys 75	Ser	Ile	Leu	Thr	Ala 80
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Ala	Ala	Leu 35	Ser	Arg	Ser	Trp	Gln 40	Glu	Ala	Arg	Leu	Gln 45	Gly	Val	Arg
Phe	Leu 50	Ser	Ser	Arg	Glu	Val 55	Asp	Arg	Met	Val	Ser 60	Thr	Pro	Ile	Gly
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                    Ala
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                                                            Thr
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                                   Ser
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Ala	Trp	Cys	Thr 20	Phe	Ser	Tyr	Glu	Met 25	Gln	Leu	Glu	Ser	His 30	Leu	Cys
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Leu	Ile	Gln 35	Glu	Ser	Phe	Pro	Gln 40	Asn	Pro	Pro	Arg	Ala 45	Arg	Phe	Gln
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Leu	Ile 50	Ser	Trp	Asn	Ala	Phe 55	Gln	Asp	Trp	Lys	Ser 60	Pro	Gln	Gly	Ser
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Ser

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Asn Cys Phe Glu Leu Thr Pro Ala Phe Ser Gln Leu Thr Ala Arg

Pro

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Phe	Gln 50	Leu	Crra	Dha	_										
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Tyr	His	Tyr 35	Tyr	Ile	Ser	Tyr	Phe 40	His	Arg	Ser	Asp	Leu 45	Ala	Lys	Leu
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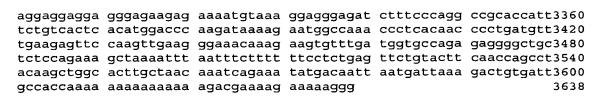
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Leu	Lys 370	Ser	Glu	Glu	Asp	Ser 375	Gly	Arg	Val	Ala	Ser 380	Tyr	Ile	Met	Ala
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Pro	Asp	Val	Ala	His 85	Ser	Asp	Val	Ala	Glu 90	Val	Arg	Gly	Gly	Ala 95	Gln
Gln	Gln	Val	Gly 100	Ala	Leu	Ala	Leu	Val 105	Val	Leu	Leu	Ala	Val 110	Ala	Leu
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Phe	Leu	Leu	Ile 740	Leu	Leu	Leu	Phe	Val 745	Ala	Val	Leu	Leu	Tyr 750	Ser	Leu
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Trp	Pro 130	Gln	Thr	Leu	Gly	Glu 135	Asn	Ile	His	Pro	His 140	Leu	Lys	Phe	Ser
Leu 145	Gly	Asn	Val	Gly	Leu 150	Glu	Gly	Ala	Val	Gln 155	Ser	Pro	Cys	Phe	His 160
Val	Leu	Arg	Asp	Gln 165	Pro	Leu	Ser	Pro	Glu 170	Asp	Val	Lys	Ser	Lys 175	Pro
Leu	Phe	Arg	Gly 180	Pro	Glu	Val	Leu	Val 185	Gln	Asp	Phe	Val	Gly 190	Phe	Lys
Phe	Ile	Gln 195	Ala	Val	Val	Ser	Ser 200	Ser	Ile	Ser	Asp	Ser 205	Thr	Pro	Ile
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Phe Gly Lys Asp Gly Leu Trp Glu Ala Phe Glu Ser Gly Asp Ile Leu

200

Thr

215

Gln

Leu

Ile

Ser

Pro

220

Gly

Ile

205

Lys Ser

Glu Asn Ala Gln Lys Arq

Asp

Ser

Arq

210

Gln Leu Cys

195

Ile Asn Cys

Pro

Phe

Lys

Thr

Trp

Ser

Lys

Pro

Cys

Lys

Phe

Ser

Ser

Tyr

Glu Lys

215 220 210 Gln Ile Gly Leu Tyr Pro Val Leu Val Ile Asp Ser Ser Leu Tyr Lys 225 230 235 240 Gly Thr Ile Pro Tyr Gly Arg Ile Leu Asp Gln Tyr Val Asn Asn Arg 250 255 245 Val Val Gln Gly Thr Gly Gln Arg Leu Phe Ser Ile Asn Leu Arg Leu 260 265 270 Gln Asp Ser Ser Asp Ala Gly Gln Tyr Leu Cys Ala Gly Asp Asn Ser 285 275 280 Glu Lys Ala Asp Leu Gln Val Leu Lys Pro Pro Glu Leu Asn Lys Asn 290 295 300 Val Gly Ser Val Thr Phe His Cys Ala Leu Gly Tyr Glu Asp Leu Arq 305 315 320 310 Val Phe Leu Cys Gln Ser Ser Gly Pro Glu Val Ala Asn Ala Lys Arq 325 330 335 Thr Ala Ala Glu Asn Cys Asp Val Val Val Asn Leu Gly Lys Arq Pro 350 345 340 Phe Glu Gly Ile Asn Pro Gln Asp Lys Asp Glv Ser Phe Arg Leu Leu 355 360 365 Gly Val Glu Ala Gly Ser Val Ile Thr Leu Arq Lys Asp Arg Tyr Leu 380 370 375 Glu Gln Gln Gly Ile Cys Gly Ala His Ser Asp Gly Gln Leu Ser Pro 395 400 385 390 Ala Trp Gln Leu Phe Val Asn Glu Glu Ser Thr Ile Pro Arg Ser Pro 410 415 405 Gly Gly Ser Cys Pro Thr Val Val Lys Gly Val Ala Val Ala Val Leu 420 425 430 Tyr Asn Arq Lys Glu Ser Lys Ser Ile Lys Tyr Trp Cys Leu Trp Glu 435 440 445 Gly Ala Gln Gly Cys Pro Leu Leu Val Asp Ser Glu Gly Trp Asn Arg 450 455 460 Val Lys Ala Gln Tyr Glu Gly Arg Leu Ser Leu Leu Glu Pro Gly 475 480 465 470 Gln Thr Asp Ala Gly Thr Phe Thr Val Ile Asn Leu Ser Arg Asn · Leu 495 485 490 Gly Phe Trp Cys Thr Asn Gly Asp Thr Leu Trp Arg Thr Thr Tyr Leu 500 505 510 Gly Glu Lys Val Pro Val Glu Ile Lys Ile Ile Glu Pro Asn Leu Gly 525 515 520 Val Gly Glu Thr Val Pro Cys His Asn Thr Ala Val Leu Leu Lys Phe 540 530 535

Tyr

Trp

Cys

Lys

Trp

Asn

Asn

545					550					555					560
Thr	Gly	Cys	Gln	Ala 565	Leu	Pro	Ser	Gln	Asp 570	Glu	Gly	Pro	Ser	Lys 575	Ala
Phe	Val	Asn	Cys 580	Asp	Glu	Asn	Ser	Arg 585	Leu	Val	Ser	Leu	Thr 590	Leu	Asn
Leu	Val	Thr 595	Arg	Ala	Asp	Glu	Gly 600	Trp	Tyr	Trp	Cys	Gly 605	Val	Lys	Gln
Gly	His 610	Phe	Tyr	Gly	Glu	Thr 615	Ala	Ala	Val	Tyr	Val 620	Ala	Val	Glu	Glu
Arg 625	Lys	Ala	Ala	Gly	Ser 630	Arg	Asp	Val	Ser	Leu 635	Ala	Lys	Ala	Asp	Ala 640
Ala	Pro	Asp	Glu	Lys 645	Val	Leu	Asp	Ser	Gly 650	Phe	Arg	Glu	Ile	Glu 655	Asn
Lys	Ala	Ile	Gln 660	Asp	Pro	Arg	Leu	Phe 665	Ala	Glu	Glu	Lys	Ala 670	Val	Ala
Asp	Thr	Arg 675	Asp	Gln	Ala	Asp	Gly 680	Ser	Arg	Ala	Ser	Val 685	Asp	Ser	Gly
Ser	Ser 690	Glu	Glu	Gln	Gly	Gly 695	Ser	Ser	Arg	Ala	Leu 700	Val	Ser	Thr	Leu
Val 705	Pro	Leu	Gly	Leu	Val 710	Leu	Ala	Val	Gly	Ala 715	Val	Ala	Val	Gly	Val 720
Ala	Arg	Ala	Arg	His 725	Arg	Lys	Asn	Val	Asp 730	Arg	Val	Ser	Ile	Arg 735	Ser
Tyr	Arg	.Thr	Asp 740	Ile	Ser	Met	Ser	Asp 745	Phe	Glu	Asn	Ser	Arg 750	Glu	Phe
Gly	Ala	Asn 755	Asp	Asn	Met	Gly	Ala 760	Ser	Ser	Ile	Thr	Gln 765	Glu	Thr	Ser
Leu	Gly 770	Gly	Lys	Glu	Glu	Phe 775	Val	Ala	Thr	Thr	Glu 780	Ser	Thr	Thr	Glu
Thr 785	Lys	Glu	Pro	Lys	Lys 790	Ala	Lys	Arg	Ser	Ser 795	Lys	Glu	Glu	Ala	Glu 800
Met	Ala	Tyr	Lys	Asp 805	Phe	Leu	Leu	Gln	Ser 810	Ser	Thr	Val	Ala	Ala 815	Glu
Ala	Gln	Asp	Gly 820	Pro	Gln	Glu	Ala								
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<212> PRT

<213> homo sapiens

Leu Gly His

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Lys	Pro 50	Ala	Val	Leu	Val	Thr 55	Val	His	Glu	Gly	Leu 60	Ala	Gly	Ala	Phe
Val 65	Leu	Ala	Gly	Gln	Gly 70	Leu	Ala	Ala	Arg	Val 75	Ile	Pro	Leu	Ala	Pro 80
Val	Phe	Leu	Val	Arg 85	Gly	Glu	Phe	Ala	Trp 90	Lys	Val	Thr	Gly	Asp 95	Leu
Glu	Ser	Leu	Ser 100	Gln	His	Ser	Arg	Asp 105	Ile	Pro	Trp	Tyr	Leu 110	Glu	Val
Trp	Phe	Ser 115	Phe	Asp	Asn	Leu	Asp 120	Leu	His	Gly	Gly	Pro 125	Pro	Glu	Ser
Ile	Ala 130	Val	Gly	Gln	Thr	Pro 135	Val	Glu	Ala	Gly	Val 140	Pro	Ala	Gly	Glu
Leu 145	Val	Glu	Asp	Asp	Ser 150	Glu	Gly	Ala	Val	Ala 155	Trp	Leu	Leu	Gln	Gln 160
Gly	Glu	Ala	Ala	Leu 165	Val	Leu	Gly	Leu	Asn 170	Pro	Pro	Leu	Ala	Val 175	His
Gln	Gln	Gly	Ala 180	Ala	Ala	Ile	Leu	Gly 185	Pro	Phe	Pro	Glu	Thr 190	Pro	Val
Leu	Asp	Ala 195	Phe	Ala	Phe	Leu	Thr 200	Val	Val	Gly	Ala	Glu 205	His	Gly	His
Arg	Ala 210	Ser	Сув	His	Pro	Leu 215	His	His	Ser	Gly	Ala 220	Ala	Gly	Asn	Arg
Gly 225	Leu	Leu	Ile	Asp	Glu 230	Glu	Leu	Pro	Gly	Leu 235	Asp	Arg	Arg	Ala	Phe 240
Leu	Gln	Leu	Thr	Ile 245	Arg	Met	Gly	Ser	Thr 250	Gln	Val	Ala	Pro	Cys 255	Ile
Leu	Leu	Pro	Gln 260	Ala	Cys	Asp	His	His 265	Thr	Glu					
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Ser	Trp	Asp	Trp 20	Phe	Phe	Arg	Glu	Pro 25	Gly	Pro	Leu	Val	Lys 30	Gly	Leu

Val Lys Gln Tyr Leu Glu Gln Pro Arg 40

Pro 45 Trp Gly Tyr

Gln	Val 50	Glu	Arg	Arg	Glu	Gly 55	Arg	Arg	Leu	Pro	Cys 60	Thr	His	Leu	Pro
Trp 65	Trp	Ala	Gly	Phe	Ser 70	Leu	Leu	Gly	Ser	Thr 75	Leu	Pro	Pro	Ser	Val 80
His	Asp	Thr	Asp	Pro 85	Arg	Ala	Ser	Pro	Cys 90	Pro	Arg	Pro	Ser	Tyr 95	Arg
Leu	Leu	Phe	Gln 100	Asp	Ile	Thr	Asp	Asn 105	Pro	Glu	Arg	Met	Glu 110	Lys	Gly
Gly	Ala	Trp 115	Val	Pro	Ala	Val	Ser 120	Gly	Gln	Lys	Glu	Val 125	Ala	Cys	Gly
Asn	Leu 130	Arg	Ser	Pro	His	Pro 135	Arg	Phe	Pro	Lys	Arg 140				
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Ser	Gly	Thr	Ala 20	Lys	Gly	Ser	Thr	Arg 25	Cys	Asp	Tyr	Pro	Gly 30	Pro	Cys
Trp	Gln	Leu 35	Arg	Ile	Pro	Gly	Thr 40	Cys	Ser	Asp	Pro	Val 45	Ser	Gly	Ser
Ser	Glu 50	Ser	Gln	Glu	Pro	Arg 55	Met	Arg	Ala	Leu	Cys 60	Ser	Pro	Ser	Ser
Lys 65	Thr	Gln	Gly	Ser	Pro 70	Pro	Arg	Lys	Gly	Ala 75	His	Val	Pro	Gln	Arg 80
Gly	Trp	Leu	Pro	Gly 85	Cys	Tyr	Leu	Phe	Tyr 90	Pro	Thr	Ser	Ala	Ala 95	Glu
Ser	Gln	Gly	Glu 100	Thr	Ala	Ser	His	Pro 105	Lys	Pro	Leu	Gly	Phe 110	Ser	Arg
Glu	Lys	Asn 115	Leu	Ser	Gln	Lys	His 120	Asp	Leu	Phe	Ser	Gly 125	Cys	Lys	
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Leu	Leu	Ser	Pro 20	Trp	Leu	Gly	Arg	Lys 25	Gly	Arg	Glu	Asp	Gly 30	Trp	Gly

Ser	Leu	Phe 35	Gly	Ile	Asp	Asp	Val 40	His	Glu	Phe	Gly	Leu 45	Glu	Gly	Ser
Thr	Thr 50	His	Lys	Glu	Ala	Ile 55	His	Ile	Arg	Leu	Ala 60	Gly	Gln	Leu	Leu
Ala 65	Gly	Cys	Pro	Ser	His 70	Arg	Ala	Ser	Ile	Asn 75	Asp	Thr	Gly	Ala	Leu 80
Ser	His	Arg	Ile	Arg 85	Asp	Val	Gly	Leu	Gln 90	Pro	Ser	Ser	Glu	Leu 95	Leu
Val	Tyr	Phe	Leu 100	Gly	Leu	Leu	Gly	Cys 105	Cys	Ser	Leu	Ala	Ser 110	Thr	Asn
Gly	Pro	His 115	Arg	Leu	Ile	Gly	Gln 120	Asp	Asp	Leu	Ala	Pro 125	Val	Leu	His
Val	Ile 130	Cys	Asp	Asp	Leu	Leu 135	Val	Trp	Trp	Glu	Gly 140				
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Tyr	Glu	Pro	Val 20	Trp	Ala	Ile	Gly	Thr 25	Gly	Lys	Thr	Ala	Thr 30	Pro	Gln
Gln	Ala	Gln 35	Glu	Val	His	Glu	Lys 40	Leu	Arg	Gly	Trp	Leu 45	Lys	Ser	Asn
Val	Ser 50	Asp	Ala	Val	Ala	Gln 55	Ser	Thr	Arg	Ile	Ile 60	Tyr	Gly	Gly	Ser
Val 65	Thr	Gly	Ala	Thr	Cys 70	Lys	Glu	Leu	Ala	Ser 75	Gln	Pro	Asp	Val	Asp 80
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Ile	Arg	Val	Arg 20	Met	Lys	Lys	Ser	Ser 25	Val	Ser	Gly	Met	Thr 30	Ala	Ala
Gly	Trp	Val	Val	Trp	Gly	Glu	Ala	Glu	Gly	Lys	Ala	Ala	Leu	Arg	Leu

35 40 45

Gly	Val 50	Glu	Phe	Leu	Glu	Val 55	Trp	Gly	Gly	Gly	Arg 60	Val	Phe	Asn	Leu
Glu 65	Lys	Ser	Gln	Pro	Ala 70	Arg	Ala	Glu	Arg	Glu 75	Cys	Glu	Arg	Gly	Ser 80
Ser	Glu	Gly	Ala	Arg 85	Asn	Gly	Val	Gly	Gly 90	Ser	Gly	Gly	Arg	Ser 95	Val
Ala	Val	Ala	Leu 100	Val	His	Gln	His	Gly 105	Val	Arg	Leu	Leu	Gly 110	Asp	Leu
. Gln	Gln	Arg 115	Val	His	Val	Gly	Ala 120	Ala	Pro	Ala	Pro	Gln 125	Val	Ala	Gly
Leu	Pro 130	Pro	Leu	Arg	Ala	Ala 135	Leu	Val	Val	Val	Gly 140	Ala	His	Leu	His
His 145	Leu	Gly	Gly	Leu	Glu 150	His	Phe	His	Leu	Ala 155	Leu	Ala	Asp	Leu	Leu 160
Asp	Val	Glu	Gly	Glu 165	Gly	Trp	His	Leu	Val 170	Asp	Arg	Gly	Leu	Gly 175	Ala
Arg	Val	His	His 180	Val	Val	Gly	Arg	Glu 185	Gly	Phe	Ala	Gln	Leu 190	Val	Pro
Arg	Arg	Leu 195	Gln	Phe	Leu	Ala	Pro 200	Leu	Gly	Gly	His	Gln 205	Ala	Arg	Ala
Gln	Leu 210	Val	His	Ala	Leu	Leu 215	Gln	Gly	Val	Pro	Arg 220	Leu	Leu	Gln	Val
Phe 225	Leu	Gly	Leu	Glu	Ala 230	Arg	Leu	Leu	Gln	Val 235	Leu	Ala	Gly	Thr	His 240
Leu	Gly	Leu	Leu	His 245	Leu	Leu	Leu	Gly	Glu 250	Gly	Leu	Leu	Glu	Val 255	Val
His	Ala	Pro	Gln 260	Ala	Leu	Arg	Leu	Ile 265	Arg	Ser	Ala	Arg	Asp 270	Ser	Ser
Ile	Thr	Ser 275	Ser	Thr	Ser	Thr	Ala 280	Ser	Ser	Asp	Glu	Ser 285	Ser	Ser	Ala
Ala	Ala 290	Ser	Ser	Ser	Gly	Arg 295	Ser	Pro	Ser	Pro	Ser 300	Ser	Ser	Pro	Ser
Phe 305	Ser	Gly	Ser	Ala	Ser 310	Asp	Ser	Phe	Ser	Asp 315	Leu	Leu	Met	Leu	Ser 320
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<213> homo sapiens

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Leu	Ile	Lys 35	Ser	Asp	Gln	Val	Asn 40	Gly	Val	Leu	Val	Leu 45	Ser	Leu	Leu
Asp	Lys 50	Ile	Ile	Gly	Ala	Val 55	Asp	Gln	Ile	Gln	Leu 60	Thr	Gln	Ala	Gln
Leu 65	Glu	Glu	Arg	Gln	Ala 70	Glu	Met	Glu	Gly	Ala 75	Val	Gln	Ser	Ile	Gln 80
Gly	Glu	Leu	Ser	Lys 85	Leu	Gly	Lys	Ala	His 90	Ala	Thr	Thr	Ser	Asn 95	Thr
Val	Ser	Lys	Leu 100	Leu	Glu	Lys	Val	Arg 105	Lys	Val	Ser	Val	Asn 110	Val	Lys
Thr	Val	Arg 115	Gly	Ser	Leu	Glu	Arg 120	Gln	Ala	Gly	Gln	Ile 125	Lys	Lys	Leu
Glu	Val 130	Asn	Glu	Ala	Glu	Leu 135	Leu	Arg	Arg	Arg	Asn 140	Phe	Lys	Val	Met
Ile 145	Tyr	Gln	Asp	Glu	Val 150	Lys	Leu	Pro	Ala	Lys 155	Leu	Ser	Ile	Ser	Lys 160
Ser	Leu	Lys	Glu	Ser 165	Glu	Ala	Leu	Pro	Glu 170	Lys	Glu	Gly	Glu	Glu 175	Leu
Gly	Glu	Gly	Glu 180	Arg	Pro	Glu	Glu	Asp 185	Ala	Ala	Ala	Leu	Glu 190	Leu	Ser
Ser	Asp	Glu 195	Ala	Val	Glu	Val	Glu 200	Glu	Val	Ile	Glu	Glu 205	Ser	Arg	Ala
Glu	Arg 210	Ile	Lys	Arg	Arg	Ala 215	Cys	Gly	Ala	Trp	Thr 220	Thr	Ser	Arg	Arg
Pro 225	Ser	Pro	Arg	Arg	Arg 230	Trp	Arg	Arg	Pro	Arg 235	Cys	Val	Pro	Ala	Arg 240
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<400> 638

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Gln															
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Ala	Pro 50	Val	His	Glu	Asp	Pro 55	His	Leu	Leu	Gly	Pro 60	Ala	Ser	Arg	Gly
Ala 65		Glu	Thr	Ala	Ala 70	Phe	Phe	Phe	Phe	Phe 75	Phe	Phe	Phe	Phe	Pro 80
Glu	Gln	His	Leu	Arg 85	Val	Gly	Leu	Leu	Leu 90	Leu	Pro	Pro	Arg	Leu 95	Ser
Pro	Arg	Pro	Gly 100	Pro	Ala	Trp	Pro	Val 105	Pro	Asn	Pro	Val	Gly 110	Trp	Pro
Gly	His	Leu 115	His	Gln	Gly	Gly	Gln 120	Leu	Leu	Ala	Gly	Thr 125	Asn	Lys	Pro
Phe	His 130	Leu	Ala	Met	Val	Val 135	Val	Phe	Ser	Met	Asp 140	Arg	Gly	Pro	Glu
Thr 145	_	Ala	Gly	Arg	Gly 150	Arg	Glu	His	Thr	Ser 155	Leu	Gly	Val	Gly	Thr 160
Ser	Leu	Xxx	Thr	Pro 165	Gln	Gln	Leu	Xxx	Gly 170	Pro	Arg	Xxx	Xxx	Phe 175	Pro
Xxx	Ala	Val	Gln 180	Ala	Ser	Pro	Xxx	Pro 185	Gly	Val	Cys	Ser	Leu 190	Ala	Trp
Val	Glu	Leu 195	Cys	His	Ile	Xxx	Asp 200	Lys	Gln	Xxx	Gly	Gly 205			
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1			Pro	5		Xxx Gly			10		Gly		Ser Leu 30		
1	Val Pro		Pro Gln	5 His		Gly		Ser 25	10 Arg	Pro		Pro	Leu	15	Xxx
1 Gly	Val Pro Ala	Met Pro	Pro Gln 20	5 His Trp	Pro	Gly Leu	Gln Met 40	Ser 25	10 Arg Pro	Pro	Xxx	Pro Ala	Leu 30	15 Ala	Xxx
Gly Pro	Val Pro Ala Ala 50	Met Pro 35	Pro Gln 20 Xxx	5 His Trp	Pro Xxx	Gly Leu Gly	Gln Met 40 Leu	Ser 25 Ala	10 Arg Pro	Pro Cys Pro	Xxx Gly Xxx	Pro Ala 45 Leu	Leu 30 Leu	15 Ala Thr	Xxx
1 Gly Pro Trp	Val Pro Ala Ala 50 Val	Met Pro 35 Arg	Pro Gln 20 Xxx Leu	5 His Trp	Pro Xxx Leu Asp 70	Gly Leu Gly 55	Gln Met 40 Leu Ser	Ser 25 Ala Ser Gln	10 Arg Pro Ala Ala	Pro Cys Pro Ala	Xxx Gly Xxx 60	Pro Ala 45 Leu Ser	Leu 30 Leu Leu	15 Ala Thr	Xxx Cys Xxx Trp

Ala Pro Pro Cys Pro Arg Phe Arg Ala Ser Val His Arg Glu His His

		115					120					125			
His	His 130	Gly	Gln	Val	Glu	Gly 135	Phe	Ile	Ser	Pro	Cys 140	Gln	Gln	Leu	Ser
Ser 145	Leu	Val	Gln	Val	Ala 150	Trp	Pro	Ala	His	Trp 155	Ile	Gly	Asp	Gly	Pro 160
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Ser	Leu	Leu	Arg 20	Ser	His	Ser	Glu	Pro 25	Pro	Ala	Leu	Val	Leu 30	Trp	Arg
Asp	His	Arg 35	Leu	Val	Pro	Gly	Thr 40	Asp	Tyr	Cys	Lys	Asp 45	Thr	Ala	Leu
Val	Pro 50	Thr	Glu	Lys	Asn	Thr 55	Gly	Gln	Gln	Glu	His 60	Thr	Phe	Ser	Gln
Tyr 65	Leu	Ala	Thr	Pro	His 70	Ser	Glu	Leu	Thr	Ile 75	Thr	His	Gly	Lys	Trp 80
Val	His	Ser	Ser	Leu 85	Trp	Ser	Asp	Pro	Ala 90	Gly	Leu	Gly	Arg	Gln 95	Glu
Gln	His	Ser	Ser 100	Ser	Ser	Leu	Ser	Pro 105	Arg	Gln	Arg	Glu	Ser 110	Leu	Asn
Cys	Lys	Arg 115	Ser	Gly	Ala	Tyr	Thr 120	Val	Arg	Glu	Lys	Glu 125	Lys	Gly	Gly
Arg	Lys 130	Gly	Phe	Ser	Pro	Arg 135	Pro	Pro	Arg	Asp	Ala 140	His	Arg	Glu	Gly
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Lys															
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Pro	Glu	Val	Lys 20	Leu	Val	Leu	Thr	Leu 25	Ala	Leu	Arg	Ala	Phe 30	Ser	Ser

gerte gente gent warit it en ermig gen einen ben 11. ib. de gibt berer bei deile wert ben begen begen 22. ib. de gente gen bei de Menn beget Rand

Met	Glu	Pro 35	Leu	Gly	Leu	Gly	Arg 40	Lys	Ala	Arg	Val	Ser 45	Ala	His	Arg
His	Thr 50	Ser	Tyr	Leu	Gln	Asp 55	Ile	Asp	Cys	Leu	Cys 60	Arg	Gly	Ser	Thr
Gly 65	Gln	Pro	Thr	Ala	Asn 70	Thr	Ala	Ala	Ser	Leu 75	Val	Ser	Ala	Ser	Leu 80
Leu	Pro	Val	His	Pro 85	Gly	Asp	Tyr	Ser	Trp 90	Ile	Asn	Leu	Pro	Lys 95	Asn
Ser	Ala	Phe	Ile 100	Met	Ser	Leu	Phe	Cys 105	Ser	Lys	Thr	Gln	Asn 110	Gly	Ser
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Lys	Xxx	Gly	Ile 20	Pro	Pro	Glu	Xxx	His 25	Gly	Pro	Ile	Thr	Ala 30	Asp	Gly
His	Arg	Xxx 35	Leu	Xxx	Xxx	Leu	Pro 40	Pro	Xxx	Gly	Xxx	Arg 45	Cys	Xxx	Xxx
Ala	Asp 50	Pro	Lys	Gly	Xxx	Gly 55	Leu	Xxx	Ala	Leu	Phe 60	Xxx	Lys	Xxx	Pro
Pro 65	Xxx	Glu	Xxx	Cys	Leu 70	Leu	Ser	Xxx	Xxx	Pro 75	Xxx	Xxx	Pro	Val	Thr 80
His	Arg	Ala	Gly	Met 85	Glu	Phe	Asn	Gly	Xxx 90	Phe	Trp	Xxx	Xxx	Thr 95	Leu
Val	His	Gly	Gln 100	Thr	Ser	Leu	Leu	Xxx 105	Gly	Tyr	Xxx	Thr	Arg 110	Leu	Lys
Xxx	Lys	Ile 115	Val	Cys	Cys	His	Ser 120	Ser	Gly	Xxx	Trp	Ser 125	Val	Cys	Gly
Leu	His 130	Arg	Phe	His	Arg	Asn 135	Gln								
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Pro	Ile	Ser	Leu	Arg	Leu	Pro	Val	Pro	Pro	Pro	Arg	Pro	Pro	Asn	Leu

20 25 30

Arg	Pro	Pro 35	Ala	Thr	Pro	Gly	Ala 40	Pro	Thr	Xxx	Pro	Xxx 45	Gln	Asn	Thr
Ala	Xxx 50	Leu	Lys	Xxx	Leu	Leu 55	Glu	Leu	Ser	Xxx	Xxx 60	Leu	Ser	Gly	Leu
Gly 65	Leu	Met	Gly	Xxx	Arg 70	Ala	Gly	Thr	Cys	Thr 75	Trp	Val	Ala	Xxx	Glu 80
Ala	His	Glu	Asp	Xxx 85	Asp	Thr	Pro	Arg	Val 90	Pro	Trp	Thr	Xxx	Tyr 95	Xxx
Arg	Trp	Ser	Ser 100	Xxx	Pro	Xxx	Ala	Ile 105	Ala	Thr	Xxx	Gly	Xxx 110	Ser	Leu
Xxx	Xxx	Gly 115	Arg	Pro	Gln	Arg	Glu 120	Xxx	Pro	Xxx	Arg	Val 125	Val	Xxx	Lys
Xxx	Thr 130	Thr	Xxx												
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<213> homo sapiens

<400> 644

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Leu	Phe	Arg 35	Ile	Lys	Ile	Gln	Gly 40	Ala	Thr	Gly	Lys	Phe 45	Asn	Met	Val
Ile	Pro 50	Leu	Val	Asp	Gly	Met 55	Ile	Val	Ser	Arg	Arg 60	Ala	Leu	Gly	Phe
Leu 65	Val	Arg	Gln	Thr	Val 70	Ile	Asn	Ile	Cys	Arg 75	Arg	Lys	Arg	Leu	Glu 80
Ser	Asp	Ser	Tyr	Ser 85	Pro	Pro	Met	Ser	Ala 90	Gly	Asn	Arg	Lys	Ser 95	Pro
Thr	Leu	Ser	Thr 100	Ser	Thr	Gly	Thr	Ser 105	Ser	Trp	Ser	Gln	Ser 110	Phe	Ile
Leu	His	Phe 115	Ser	Arg	Arg	Leu	Asp 120	Ser	Arg	Thr	Ala	Val 125	Leu	Arg	Pro

Leu Asn 130 Phe

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<213> homo sapiens

<400> 645

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Ala	Val	Val	Met 20	Phe	Ser	Gly	Leu	Cys 25	Gln	Pro	Thr	Asp	Pro 30	Cys	Gln
Val	Leu	Glu 35	Ile	Leu	Leu	Leu	Pro 40	Arg	Cys	Tyr	Phe	Ser 45	Ala	Gly	Ile
Lys	Leu 50	Leu	Xxx	Val	Ala	Arg 55	Pro	Arg	Thr	Ser	Lys 60	Asp	Ser	Cys	Tyr
Ser 65	Ala	Thr	Val	Tyr	Thr 70	Ala	His	Leu	Ser	Tyr 75	Ser	His	Val	Leu	Ser 80
Ser	Leu	Val	Arg	Leu 85	Phe										
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Ala	Asp	Arg	Cys 20	Cys	Glu	Leu	Tyr	Ile 25	Cys	Lys	Arg	Cys	Phe 30	Thr	Thr
Ser	Ala	Gly 35	Phe	Ile	Thr	Ala	Ser 40	Trp	Ser	Arg	Val	Ala 45	Ile	Leu	Pro
Ala	Ile 50	Pro	Ala	Lys	Gln	Thr 55	Pro	Glu	Asn	Tyr	Pro 60	Leu	Arg	Ser	Gly
Val 65	Leu	Arg	Lys	Phe	Leu 70	Glu	Pro	Lys	Ile	Arg 75	Arg	Asn	Pro	Gly	Leu 80
Ser	Phe	Leu	Arg	Ser 85	Lys	Met	Tyr	Tyr	Gln 90	Leu	Arg	Pro	Gly	Glu 95	His
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Ala	Ser	Gly	Arg 20	Cys	Gly	Gly	Pro	Arg 25	Gly	Trp	Gly	Pro	Ser 30	Thr	Gly
Ala	Thr	Pro 35	Arg	Gln	Leu	Thr	Met 40	Asn	Ile	Pro	Phe	Gln 45	Ser	Ile	His
Phe	Ile 50		Tyr	Glu	Phe	Leu 55	Gln	Glu	Gln	Val	Asn 60	Pro	His	Arg	Thr

Gly Leu Ala Gly Ala Leu Asn Pro Gln Ser His Ile Ile Ser Gly Tyr 65 70 75 80 Val Ala Ala Ala Ala Arg Gly Pro Leu Asp Leu Arg 90 85 <210> 648 <211> 280 <212> PRT <213> homo sapiens <400> 648 Ala Leu Phe Asp Gly Gly Gly Gly Thr Ala Val Gly Ser Ala Lys Ser Ala Ala Glu Ala Gly Ala Ala Gly Gln Arg Leu Arg Ser Val Asn Cys 20 25 30 Glu Ala Ile Met Ala Gln Gln Ile Gln Gln Ala Tyr Asp Asp Arg Leu 40 Glu Ile Ala Val Gln Pro Leu Val Ser Glu Arg Leu Glu Ser Asn Leu 50 55 60 Val Glu Tyr Ala Glu Asp Asp Asn Ile Tyr Gln Gln Lys Leu Tyr Lys 65 75 70 80 His Tyr Ile Thr Ile Lys Asp Leu Lys Lys Tyr Ser Arg Lys Arg Pro 95 85 90 Asn Cys Phe Tyr Arq Ala Phe Gly Phe Ser His Leu Glu Ala 100 105 Asp Glu Leu Gln Arg Phe Ala Val Ser Ala Leu Leu Asp Ser Lys Lys 115 120 125 Val Ser Thr Glu Lys Ser Lys Glu Asp Leu Gln Gly Phe Phe Thr Ile 130 135 140 Glu Asp Phe His Thr Phe Met Ile Glu Gln Val Glu Lys Asn Asp Leu 145 150 155 160 Ala Gln Thr Ser Val Asp Leu Leu Ala Ser Phe Asn Asp Gln Ser Thr 165 170 175 Val Tyr Leu Val Thr Gly Tyr Ser Asp Tyr Leu Arg Leu Leu Ser Leu 180 190 185 Gln Glu Ser Phe Phe Glu His Phe Ile Glu Gly Gly Arg Thr Arg Lys 195 200 205 Gln Glu Val Lys Glu Phe Cys Gln Val Glu Pro Met Cys Lys Glu Ser 210 215 220 Asp His Ile His Ile Ile Ala Leu Ala Gln Ala Leu Ser Val Ser Ile 225 230 235 240 Gln Val Glu Tyr Met Gly Glu Gly Gly Thr Thr Asp Arg Asn Pro His 245 250 255 Ile Gly Phe Pro Glu Ser Glu Pro Lys Val Tyr Leu Leu Tyr Arq Pro

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Gly His Tyr Asp Ile Leu Tyr Lys 275 280

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<213> homo sapiens

<400> 649

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Arg	Gly	Gly	Gln 20	Gln	Gly	Ser	Ser	Gly 25	Leu	Glu	Pro	Ala	Leu 30	Phe	Val
Glu	Asp	Ile 35	Val	Val	Ser	Arg	Pro 40	Val	Glu	Lys	Val	Asp 45	Leu	Gly	Leu
Gly	Ala 50	Leu	Arg	Glu	Asp	Val 55	Arg	Ile	Gly	Gly	Ala 60	Ala	Leu	Ala	Ala
Val 65	His	Val	Leu	His	Leu 70	Asp	Gly	His	Ala	Glu 75	Gly	Leu	Gly	Gln	Arg 80
Asn	Asp	Val	Asp	Val 85	Val	Ala	Leu	Leu	Ala 90	His	Gly	Leu	His	Leu 95	Leu
Leu	Ala	Glu	Leu 100	Leu	Asp	Ser	Pro	Ser 105	Thr	Leu	Asp	Glu	Val 110	Leu	Glu
Glu	Leu	Ala 115	Leu	Ala	Leu	Gln	Val 120	Ala	Arg	Gly	Glu	Gln 125	Pro	Gln	Val
Asp	His 130	Lys	Val	Val	Gly	Gly 135	Ala	Leu	Val	Ile	Glu 140	Gly	Gly	Gln	Gln
Val 145	Gly	Asp	Arg	Gly	Leu 150	Leu	Leu	His	Leu	Leu 155	Asn	Gln	Val	His	Glu 160
Arg	Val	Val	Glu	Ile 165	Leu	Asn	Cys	Glu	Phe 170	Ser	Glu	Ala	Leu	Gly 175	His
Gln	Val	Phe	Leu 180	Ala	Leu	Gly	Arg	His 185	Ser	Leu	Glu	Pro	Leu 190	Gln	Leu
Leu	Ala	Val 195	Ile	Gln	Gln	Cys	Leu 200	Gln	Val	Gly	Glu	Ser 205	Glu	Ser	Pro
Ile	Glu 210	Thr	Val	Ala	Val	Arg 215	Pro	Gly	Leu	Ala	Asp 220	Val	Arg	Val	Leu
Phe 225	Val	Glu	Val	Leu	Asp 230	Leu	Leu	Leu	Ile	Asp 235	Val	Val	Ile	Phe	Ser 240

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Ile Leu Leu Val

<211> 424

<212> PRT

<213> homo sapiens

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Met	Gly	Asn	Pro 340	Thr	Leu	Gly	Asn	Leu 345	Ala	Ser	Ala	Ile	Arg 350	Glu	Glu
Leu	Asn	Gly 355	Ala	Met	Glu	His	Thr 360	Asn	Ser	Asn	Glu	Ser 365	Asp	Ser	Ser
Pro	Gly 370	Arg	Ser	Pro	Met	Gln 375	Ala	Val	His	Pro	Val 380	His	Val	Lys	Glu
Glu 385	Pro	Leu	Asp	Pro	Glu 390	Glu	Ala	Glu	Gly	Pro 395	Leu	Ser	Leu	Val	Thr 400
Thr	Ala	Asn	His	Ser 405	Pro	Asp	Phe	Asp	His 410	Asp	Arg	Asp	Tyr	Glu 415	Asp
Glu	Pro	Val	Asn 420	Glu	Asp	Met	Glu								
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 Gln	Arg	Ala	Pro 20	Ala	Ser	His	Asp	Asp 25	Pro	Pro	Ala	Cys	Glu 30	Val	Tyr
Arg	Thr	Gln 35	Ser	Arg	Pro	Ser	Ala 40	Leu	Glu	Ser	Gly	Ile 45	Lys	Cys	His
Ser	Leu 50	Gln	Val	Arg	Ile	Gly 55	Gly	Phe	Ser	Thr	Glu 60	Leu	Thr	Ser	Tyr
Ser 65	Asn	Asp	Pro	Asn	Arg 70	Pro	Pro	Asp	Ser	Arg 75	His	Pro	Arg	Pro	Leu 80
Cys	His	His	Asn	His 85	Gln	His	Ala	His	Gly 90	Gly	Thr	His	Pro	Gln 95	Ala
Val	Leu	Arg	Gln 100	Ile	Gln	Arg	Ala	His 105	Phe	Val	Ser	Arg	Tyr 110	Cys	Ala
Glu	Pro	Arg 115	Ile	Leu											
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His	Ile	Phe	Ile 20	Met	Ile	His	Thr	Asn 25	Leu	Lys	Lys	Lys	Phe 30	Ser	Cys

Cys	Val	Leu 35	Val	Phe	Leu	Leu	Phe 40	Ala	Val	Ile	Cys	Val 45	Trp	Lys	Glu
Lys	Lys 50	Lys	Gly	Ser	Tyr	Tyr 55	Asp	Ser	Phe	Lys	Leu 60	Gln	Thr	Lys	Glu
Phe 65	Gln	Val	Leu	Lys	Ser 70	Leu	Gly	Lys	Leu	Ala 75	Met	Gly	Ser	Asp	Ser 80
Gln	Ser	Val	Ser	Ser 85	Ser	Ser	Thr	Gln	Asp 90	Pro	His	Arg	Gly	Arg 95	Gln
Thr	Leu	Gly	Ser 100	Leu	Arg	Gly	Leu	Ala 105	Lys	Ala	Lys	Pro	Glu 110	Ala	Ser
Phe	Gln	Val 115	Trp	Asn	ГÀЗ	Asp	Ser 120	Ser	Ser	Lys	Asn	Leu 125	Ile	Pro	Arg
Leu	Gln 130	Lys	Ile	Trp	Lys	Asn 135	Tyr	Leu	Ser	Met	Asn 140	Lys	Tyr	Lys	Val
Ser 145	Tyr	Lys	Gly	Pro	Gly 150	Pro	Gly	Ile	Lys	Phe 155	Ser	Ala	Glu	Ala	Leu 160
Arg	Cys	His	Leu	Arg 165	Asp	His	Val	Asn	Val 170	Ser	Met	Val	Glu	Val 175	Thr
Asp	Phe	Pro	Phe 180	Asn	Thr	Ser	Glu	Trp 185	Glu	Gly	Tyr	Leu	Pro 190	Lys	Glu
Ser	Ile	Arg 195	Thr	Lys	Ala	Gly	Pro 200	Trp	Gly	Arg	Cys	Ala 205	Val	Val	Ser
Ser	Ala 210	Gly	Ser	Leu	Lys	Ser 215	Ser	Gln	Leu	Gly	Arg 220	Glu	Ile	Asp	Asp
His 225	Asp	Ala	Val	Leu	Arg 230	Phe	Asn	Gly	Ala	Pro 235	Thr	Ala	Asn	Phe	Gln 240
Gln	Asp	Val	Gly	Thr 245	Lys	Thr	Thr	Ile	Arg 250	Leu	Met	Asn	Ser	Gln 255	Leu
Val	Thr	Thr	Glu 260	Lys	Arg	Phe	Leu	Lys 265	Asp	Ser	Leu	Tyr	Asn 270	Glu	Gly
Ile	Leu	Ile 275	Val	Trp	Asp	Pro	Ser 280	Val	Tyr	His	Ser	Asp 285	Ile	Pro	Lys
Trp	Tyr 290	Gln	Asn	Pro	Asp	Tyr 295	Asn	Phe	Phe	Asn	Asn 300	Tyr	Lys	Thr	Tyr
Arg 305	Lys	Leu	His	Pro	Asn 310	Gln	Pro	Phe	Tyr	Ile 315	Leu	Lys	Pro	Gln	Met 320
Pro	Trp	Glu	Leu	Trp 325	Asp	Ile	Leu	Gln	Glu 330	Ile	Ser	Pro	Glu	Glu 335	Ile
Gln	Pro	Asn	Pro 340	Pro	Ser	Ser	Gly	Met 345	Leu	Gly	Ile	Ile	Ile 350	Met	Met
Thr	Leu	Cys 355	Asp	Gln	Val	Asp	Ile 360	Tyr	Glu	Ser	Leu	Pro 365	Ser	Lys	Arg

Lys															
-10	Thr 370	Asp	Val	Cys	Tyr	Tyr 375	Tyr	Gln	Lys	Phe	Phe 380	Asp	Ser	Ala	Cys
Thr 385	Met	Gly	Ala	Tyr	His 390	Pro	Leu	Leu	Tyr	Glu 395	Lys	Asn	Leu	Val	Lys 400
His	Leu	Asn	Gln	Gly 405	Thr	Asp	Glu	Asp	Ile 410	Tyr	Leu	Leu	Gly	Lys 415	Ala
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Leu	Leu	Ala	Asn 20	Pro	Pro	Gly	Ala	Ala 25	Gly	Pro	Ser	Gly	Pro 30	Gln	Glu
Leu	Ala	Leu 35	Leu	Ser	Met	Gly	Gly 40	Lys	Val	Tyr	Trp	Val	Cys	Arg	Pro
Arg	Pro 50	Ile	Phe	Leu	Arg	Met 55	Ile	Lys	Thr	His	Leu 60	Cys	Trp	Phe	Met
Val 65	Thr	Cys	Ala	Ala	Gly 70	Phe	Gly	Asp	Ala	Glu 75	Val	Cys	Arg	Ser	Ile 80
Ser	Gly	Gly	Leu	Asp 85	Ala	Val	Leu	Pro	Phe 90	Ser	Leu	Trp	Cys	Trp 95	Leu
Cys	Gly	Leu	Cys 100	Gly	Thr	Phe	Cys	Pro 105	Leu	Ala	Arg	Cys	Thr 110	Leu	Gly
Arg	Gly	Gly 115	Cys	Gly	Cys	Ser	Ala 120	Arg	Ser	Val	Ala	Ala 125	Ala	Arg	Ser
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Pro	Ala	Leu	Pro 20	Arg	Leu	Ala	Asn	Asn 25	Thr	Val	Arg	Met	Ala 30	Lys	Gly
Asp	Pro	Lys 35	Lys	Pro	Lys	Gly	Lys 40	Met	Ser	Ala	Tyr	Ala 45	Phe	Phe	Val

Gln	Thr 50	Cys	Arg	Glu	Glu	His 55	Lys	Lys	Lys	Asn	Pro 60	Glu	Val	Pro	Val
Asn 65	Phe	Ala	Glu	Phe	Ser 70	Lys	Lys	Cys	Ser	Glu 75	Arg	Trp	Lys	Thr	Met 80
Ser	Gly	Lys	Glu	Lys 85	Ser	Lys	Phe	Asp	Glu 90	Met	Ala	Lys	Ala	Asp 95	Lys
Val	Arg	Tyr	Asp 100	Arg	Glu	Met	Lys	Asp 105	Tyr	Gly	Pro	Ala	Lys 110	Gly	Gly
Lys	Lys	Lys 115	Lys	Asp	Pro	Asn	Ala 120	Pro	Lys	Arg	Pro	Pro 125	Ser	Gly	Phe
Phe	Leu 130	Phe	Cys	Ser	Glu	Phe 135	Arg	Pro	Lys	Ile	Lys 140	Ser	Thr	Asn	Pro
Gly 145	Ile	Ser	Ile	Gly	Asp 150	Val	Ala	Lys	Lys	Leu 155	Gly	Glu	Met	Trp	Asn 160
Asn	Leu	Asn	Asp	Ser 165	Glu	Lys	Gln	Pro	Tyr 170	Ile	Thr	Lys	Thr	Ala 175	Lys
Leu	Lys	Glu	Lys 180	Tyr	Glu	Lys	Asp	Val 185	Ala	Asp	Tyr	Lys	Ser 190	Lys	Gly
Lys	Phe	Asp 195	Gly	Ala	Lys	Gly	Pro 200	Ala	Lys	Val	Ala	Arg 205	Lys	Lys	Val
Glu	Glu 210	Glu	Asp	Glu	Glu	Asp 215	Gly	Gly	Gly	Gly	Gly 220	Gly	Gly	Gly	Gly
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Leu	Leu	Leu	Leu 20	Ala	Ser	Leu	Ser	Trp 25	Ser	Ile	Ile	Leu	His 30	Phe	Pro
Ile	Ile	Ala 35	His	Phe	Ile	Cys	Leu 40	Cys	His	Phe	Ile	Lys 45	Phe	Arg	Phe
Leu	Phe 50	Pro	Gly	His.	Arg	Leu 55	Pro	Pro	Leu	Arg	Ala 60	Leu	Leu	Gly	Lys
Phe 65	Arg	Lys	Ile	Asp	Arg 70	Asp	Leu	Trp	Val	Phe 75	Leu	Leu	Met	Phe	Phe 80
Ser	Ala	Cys	Leu	His 85	Lys	Glu	Gly	Ile	Ser 90	Gly	His	Leu	Ala	Leu 95	Trp

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Cys	Arg	Val 35	Ile	Ala	Arg	Leu	Thr 40	Lys	Glu	Val	Thr	Ala 45	Ala	Arg	Glu
Ala	Leu 50	Ala	Thr	Leu	Lys	Pro 55	Gln	Ala	Gly	Leu	Ile 60	Val	Pro	Gln	Ala
Val 65	Pro	Ser	Ser	Gln	Pro 70	Ser	Val	Val	Gly	Ala 75	Gly	Glu	Pro	Met	Asp 80
Leu	Gly	Glu	Leu	Val 85	Gly	Met	Thr	Pro	Glu 90	Ile	Ile	Gln	Lys	Leu 95	Gln
Asp	Lys	Ala	Thr 100	Val	Leu	Thr	Thr	Glu 105	Arg	Lys	Lys	Arg	Gly 110	Lys	Thr
Val	Pro	Glu 115	Glu	Leu	Val	Lys	Pro 120	Glu	Glu	Leu	Ser	Lys 125	Tyr	Arg	Gln
Val	Ala 130	Ser	His	Val	Gly	Leu 135	His	Ser	Ala	Ser	Ile 140	Pro	Gly	Ile	Leu
Ala 145	Leu	Asp	Leu	Cys	Pro 150	Ser	Asp	Thr	Asn	Lys 155	Ile	Leu	Thr	Gly	Gly 160
Ala	Asp	Lys	Asn	Val 165	Val	Val	Phe	Asp	Lys 170	Ser	Ser	Glu	Gln	Ile 175	Leu
Ala	Thr	Leu	Lys 180	Gly	His	Thr	Lys	Lys 185	Val	Thr	Ser	Val	Val 190	Phe	His
Pro	Ser	Gln 195	Asp	Leu	Val	Phe	Ser 200	Ala	Ser	Pro	Asp	Ala 205	Thr	Ile	Arg
Ile	Trp 210	Ser	Val	Pro	Asn	Ala 215	Ser	Cys	Val	Gln	Val 220	Val	Arg	Ala	His
Glu 225	Ser	Ala	Val	Thr	Gly 230	Leu	Ser	Leu	His	Ala 235	Thr	Gly	Asp	Tyr	Leu 240
Leu	Ser	Ser	Ser	Asp 245	Asp	Gln	Tyr	Trp	Ala 250	Phe	Ser	Asp	Ile	Gln 255	Thr
Gly	Arg	Val	Leu 260	Thr	Lys	Val	Thr	Asp 265	Glu	Thr	Ser	Gly	Cys 270	Ser	Leu
Thr	Cys	Ala 275	Gln	Phe	His	Pro	Asp 280	Gly	Leu	Ile	Phe	Gly 285	Thr	Gly	Thr

Met	Asp 290	Ser	Gln	Ile	Lys	Ile 295	Trp	Asp	Leu	Lys	Glu 300	Arg	Thr	Asn	Val
Ala 305	Asn	Phe	Pro	Gly	His 310	Ser	Gly	Pro	Ile	Thr 315	Ser	Ile	Ala	Phe	Ser 320
Glu	Asn	Gly	Tyr	Tyr 325	Leu	Ala	Thr	Ala	Ala 330	Asp	Asp	Ser	Ser	Val 335	Lys
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Thr	Thr	Leu 355	Arg												
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Gln	Val	Val	Thr 20	Ile	Leu	Arg	Glu	Gly 25	Asp	Ala	Ser	Asp	Gly 30	Ala	Arg
Val	Ala	Arg 35	Glu	Val	Gly	His	Ile 40	Ser	Thr	Phe	Leu	Gln 45	Val	Pro	Asp
Leu	Asp 50	Leu	Arg	Val	His	Gly 55	Ser	Cys	Ser	Lys	Asp 60	Glu	Ser	Val	Arg
Val 65	Glu	Leu	Cys	Thr	Gly 70	Glu	Arg	Ala	Ala	Gly 75	Gly	Leu	Ile	Cys	His 80
Leu	Gly	Glu	His	Thr 85	Pro	Cys	Leu	Asp	Val 90	Arg	Glu	Ser	Pro	Val 95	Leu
Ile	Ile	Gly	Gly 100	Ala	Gln	Glu	Ile	Val 105	Ala	Ser	Gly	Met	Lys 110	Ala	Glu
Ala	Cys	His 115	Ser	Thr	Leu	Met	Gly 120	Pro	Asn	His	Leu	Tyr 125	Thr	Arg	Gly
Ile	Gly 130	Asp	Arg	Pro	Asn	Pro 135	Asp	Ser	Gly	Ile	Gly 140	Gly	Ser	Arg	Lys
His 145	Gln	Val	Leu	Gly	Arg 150	Val	Lys	His	His	Ala 155	Gly	Asp	Leu	Leu	Gly 160
Met	Ala	Phe	Glu	Gly 165	Ser	Gln	Asp	Leu	Phe 170	Arg	Thr	Phe	Val	Lys 175	His
Asn	Asp	Ile	Phe 180	Ile	Arg	Pro	Thr	Ser 185	Glu	Asp	Leu	Val	Gly 190	Val	Gly
Arg	Ala	Glu 195	Val	Gln	Gly	Gln	Asp 200	Pro	Arg	Asn	Ala	Gly 205	Thr	Val	Gln
								_		_	_		_		

Pro His Val Gly Cys His Leu Pro Val Phe Ala Glu Leu Phe Trp Leu

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Ala	Lys	Asp	Thr 20	Gln	Ile	Lys	Glu	Ser 25	Leu	Trp	Leu	Arg	Thr 30	Gln	Gly
Arg	Glu	Val 35	Pro	Gly	Leu	Cys	Pro 40	Cys	Trp	Ala	Arg	Arg 45	Arg	Leu	Gly
Thr	Lys 50	Trp	Glu	Lys	Cys	Trp 55	Glu	Gly	Leu	Ser	Gly 60	Arg	Gly	His	Lys
Ser 65	Ser	Gly	Gly	Gln	His 70	Cys	Arg	Gln	Val	Met 75	Gly	Gly	Thr	His	Gly 80
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Arg	Gly	Asp 35	Gly	Gln	Arg	Asp	Pro 40	Ala	Tyr	Leu	Cys	Trp 45	Gln	Gln	Glu
Arg	His 50	Gly	Ala	Pro	Glu	Glu 55		Tyr	His	Pro	Cys 60	Pro	Gly	Pro	Ser

			1											- 1	
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Ser	Ala	Ser	Ala	Ser 85	Ala	Ser	Gly	Pro	Ile 90	Arg	Pro	Leu	Gln	Ser 95	Thr
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Ala 145	Arg	Ser	Pro												

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